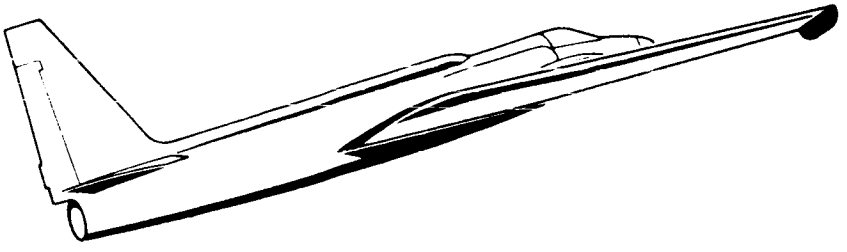
Airborne Instrumentation Research Project

Summary Catalog #17

Period: 1 January - 30 September 1980

Flights: 80-005 through 80-159



National Aeronautics and
Space Administration

Ames Research Center
Moffett Field, California 94035

Airborne Missions and Applications Division

FOREWORD

Summary catalogs are published by the Airborne Instrumentation Research Project (AIRP) located at NASA/Ames Research Center. Each catalog describes the data collected by high altitude U-2 aircraft operated out of Ames Research Center. This seventeenth catalog covers the period of 1 January through 30 September 1980. No cumulative catalogs are planned.

The catalog is assembled from key elements of the Flight Summary Report (FSR) published for each data collection flight. These elements are: a Data Summary page, a Flight Summary page, and a Track Map depicting the ground track of the aircraft while various sensor systems collected data.

Imagery data collected by the Project is placed in the public domain and is available through the EROS Data Center, Sioux Falls, South Dakota 57198. Information on any data flight or other Project activity may be obtained by contacting the AIRP Operational Support Section:

AIRP Operational Support Section
Mail Stop: 240-12
NASA/Ames Research Center
Moffett Field, California 94035
Telephone: (415) 965-6252
FTS: 448-6252

1. AMES RESEARCH CENTER, AIRBORNE INSTRUMENTATION RESEARCH PROJECT (AIRP).

1.1 AIRP Description.

In April 1971, NASA, under a loan agreement with the United States Air Force, acquired two U-2 high altitude aircraft and established the Ames-Earth Resources Aircraft Project (ERAP). The Project became operational with the first data collection flight on 31 August 1971. In June 1975, the Project name was changed to Airborne Instrumentation Research Project (AIRP).

The objectives of the Project are:

- Collect underflight data in support of LANDSAT and other NASA satellite investigations.
- Support other general Earth Resources programs in conjunction with various government agencies.
- Collect data for disaster assessment.
- Serve as a platform to conduct observations in astronomy, high altitude atmospheric physics, and geophysics.
- Provide sensor definition and evaluation in support of spacecraft programs (NIMBUS, EOS, SEOS, etc.).
- Develop techniques in the analysis, interpretation, and processing of remote sensor data.

The Project supports NASA's Earth Observations Program for the NASA Headquarters Office of Space and Terrestrial Applications (OSTA). Coordination of activities between the Ames-AIRP and other functions or components of the Earth Observations Program are maintained through OSTA.

Aircraft maintenance, pilots, operational and sensor support are provided to the Project by Lockheed Aircraft Corporation under contract to NASA. Data Handling activities of the Project are conducted by Analytical Technology Applications Corporation (ATAC). The AIRP Operational Support Section, staffed by ATAC, performs flight documentation and provides technical support to other Project activities. A computerized Image Selection System (ISS) provides a geographically based retrieval capability for identifying specific frames of U-2 photography. Users of this catalog desiring such information may contact the Operational Support Section for this service.

1.2 U-2 Aircraft Operational Characteristics.

The U-2 is a single place aircraft designed for high altitude, long range operation. Operational altitude of the U-2 is 60,000 to 70,000 feet. Due to aerodynamic characteristics, the U-2 is a constant Mach speed (0.69) aircraft which maintains a flight profile of 392-400 knots TAS at cruise altitude. Normal maximum endurance is approximately 6.5 hours providing a range of 2500 nautical miles.

At normal cruise altitude of 65,000 feet, the U-2 is essentially above all atmospheric turbulence or cross wind

1.2 --Continued.

factors offering an exceptionally stable platform for sensor operation. The primary airborne navigation equipment for the aircraft is an optical view sight system, providing the pilot visual coverage below the aircraft for flight line reference. The aircraft also carries standard VOR/ADF equipment for navigation to the area of interest.

The main operating base of the aircraft is Ames Research Center, Moffett Field, California. To satisfy flight requirements outside the normal operating range of the aircraft, periodic deployments are conducted to various staging bases around the United States. For eastern U.S. flight requirements, an aircraft and support personnel are staged to Wallops Flight Center, Virginia, to conduct data flights. Except for very special circumstances, all U-2 photographic coverage is restricted to the land areas and adjacent coastal waters of the United States.

1.3 AIRP Sensor Systems.

The active photographic and non-photographic sensor systems available to the Project during the catalog period are described in Tables 1-1 and 1-2. The data annotation formats for the Vinten Camera System, RC-10 Camera, and HR-732 Camera imagery are illustrated by Figures 1-1, 1-2, and 1-3 respectively.

Table 1-1. Ames-AIRP Photographic Sensor Systems

System/Configuration	Sensor Type	Sensor ID	Lens Data	Format (Inches)	Coverage per Frame @ 65,000' MSL (Nautical Miles)	Nominal Resolution (GRD-Feet)	Remarks
Vinten System A	Vinten (4)	001 002 003 004	1-3/4 in. f/2.8 (4)	2-1/4 x 2-3/16 (4)	14 x 14	30-50	Filtration - 475-575 nm 580-680 nm 690-760 nm (Color IR) 510-900 nm LANDSAT RBV Simulation
I^2 Multispectral Camera	I^2 Mark 1	005	100 mm f/2.8 (4)	3.5 x 3.5 (4 images)	9 x 9	20-30	4 Spectral Bands 440-560 nm 540-620 nm 630-700 nm 760-900 nm
HR-732	HR-732	009,037, 038,039	24 in. f/8.0	9 x 18	4 x 8	2-8	HR-732 Camera may be used as a single camera system.
Vinten System B	Vinten (4)	011 012 013 014	1-3/4 in. f/2.8 (4)	2-1/4 x 2-3/16 (4)	14 x 14	30-50	Identical to Vinten System A.
RC-10 Camera	Wild Heerbrug RC-10	017,023, 031,033, 035,036	6 in. f/4.0	9 x 9	16 x 16	15-25	Metric Camera; any RC-10 Camera may be used singularly or with either Vinten System.
A-3 Configuration	HR-732	018	24 in. (f/8.0)	9 x 18	4 x 8	2-8	Three vertical cameras provide multispectral or multiemulsion capability.
	HR-732	019	24 in. (f/8.0)	9 x 18	4 x 8	2-8	
	HR-732	020	24 in. (f/8.0)	9 x 18	4 x 8	2-8	
RC-10 Camera	Wild Heerbrug RC-10	026,034	12 in. f/5.6	9 x 9	8 x 8	8-16	Metric Camera; either RC-10 Camera may be used singularly or with either Vinten System.

Table 1-1. --Continued

System/Configuration	Sensor Type	Sensor ID	Lens Data	Format (Inches)	Coverage per Frame @ 65,000' MSL (Nautical Miles)	Nominal Resolution (GRD-Feet)	Remarks
Optical Bar Panoramic	ITEK KA-80A	029	24 in. f/3.5	4.5 x 50	2 x 24 (120° scan)	1-5	High resolution, wide area coverage; mono or stereo mode operation.
Dual RC-10	RC-10	017,023, 031,033, 035,036	6 in. f/4.0 6 in. f/4.0 6 in. f/4.0	9 x 9	16 x 16	15-25	Two camera system; any two RC-10 cameras may be combined to provide a dual scale and/or dual emulsion capability.
	RC-10	026,034	12 in. f/5.6	9 x 9	8 x 8	8-16	
A-4 Configuration	RC-10	017,023, 031,033, 035,036, 026,034	6 in. f/4.0 6 in. f/4.0 6 in. f/4.0 12 in. f/5.6	9 x 9 9 x 9 9 x 9 9 x 9	16 x 16 16 x 16 16 x 16 8 x 8	15-25 15-25 15-25 8-16	Dual scale system with option for 6 or 12 inch focal length lens on RC-10 camera; provides dual scale and multi-emulsion capability.
	HR-732	009,037, 038,039	24 in. f/8.0	9 x 10	4 x 8	2-8	
Hycon Panoramic Camera	HP-307	046	3 in. f/2.8	2-1/4 x 7	8 x 47 (130° scan)	20-40	Wide area coverage; used as tracking camera for Infrared Radiometer.
Research Camera System	RCS	055,056	24 in. f/13.5 (2 lens)	2-3/8x 29-3/4 (2 rolls)	1.1 x 11 (70° scan)	3/4-2	High resolution camera system consisting of two rolls of film and two lenses. Cameras are mounted at 26° convergence angle for stereo viewing.

Table 1-2. Ames-AIRP Non-Photographic Sensor Systems

System/Configuration	Sensor Type	Sensor ID	Crosstrack Coverage @ 65000' MSL (Nautical Miles)	Nominal Resolution (GRD-feet)	Remarks
Aerosol Particulate Sampler	ARC Experimental	024	-	-	Collects high altitude aerosol particles.
Ocean Color Scanner	GSFC Satellite Prototype for Nimbus-G	027	21 swath (90° scan)	3.79 mrad IFOV	10 channel multispectral scanner. Data recorded on magnetic tape in analog form; 4 channels(selective) in digital form.
Water Vapor Radiometer	ARC Experimental	032	-	-	Measures emissions in water vapor infrared spectral region. Data recorded on magnetic tape(digital).
Stratospheric Cryogenic Sampler	ARC Experimental	042	-	-	Measures quantities of chlorinated hydrocarbons in the stratosphere.
CO^2 Sampler	UCLA Experimental	043	-	-	Collects free air samples for laboratory research and analysis.
Heat Capacity Mapper	GSFC Satellite Prototype for Nimbus-G	044	21 swath (90° scan)	2.8 mrad IFOV	Thermal scanner senses the visible and thermal infrared portions of the spectrum. Data recorded on magnetic tape in analog form.
F-2 Foil Air Sampler	ARC Experimental	047	-	-	Sampler collects stratospheric aerosols and trace gas samples.
Stratospheric Air Sampler II	ARC Experimental	048	-	-	Measures nitric oxide and ozone concentrations. Data recorded on magnetic tape in digital form.
Aether Drift	Lawrence Berkeley Laboratory Experimental	049	-	-	Two upward looking radiometers measure the motion of the solar system with respect to distant matter in the universe.
Resonance Fluorescence Experiment	ARC Experimental	051	-	-	Measures chlorine molecule concentrations in the stratosphere.

Table 1-2. --Continued

System/Configuration	Sensor Type	Sensor ID	Crosstrack Coverage @ 65000' MSL (Nautical Miles)	Nominal Resolution (GRD-feet)	Remarks
Infrared Spectrometer	ARC Experimental	052	-	-	Measures minor atmospheric constituents and their concentrations.
Ocean Temperature Scanner	GSFC Experimental	053	12 swath (60° scan)	7.0 mrad IFOV	Five channel scanning radiometer recording four infrared and one visible channel.
Calibrated Airborne Measurements Program	Lockheed Palo Alto Laboratories	054	-	-	Fixed position downward looking six channel infrared radiometer.
Ultraviolet Spectrometer	GSFC Experimental	057	-	-	Upward looking scanning spectrometer. Data recorded on magnetic tape.
Multiple Filter Sampler	ARC Experimental	058	-	-	Determines mass mixing ratios and chemical composition of stratospheric aerosols.
Daedalus Multispectral Scanner	ARC Experimental	059	(8,18 swath) (42-85 scan)	1.25,2.5 mrad IFOV	Eleven channel multispectral scanner. 10 channels visible and one channel infrared recorded on digital tape.
Inertial Navigation System	ARC Experimental	060	-	-	Records inflight housekeeping data on cassette tape.
Quartz Crystal Microbalance Cascade Impactor	ARC Experimental	061	-	-	Senses mass of suspended particulates as a function of particle size.
Modified Airborne Particle Sampler	ARC Experimental	062	-	-	Coats collected aerosols with thin gold film for scanning electron microscopy.

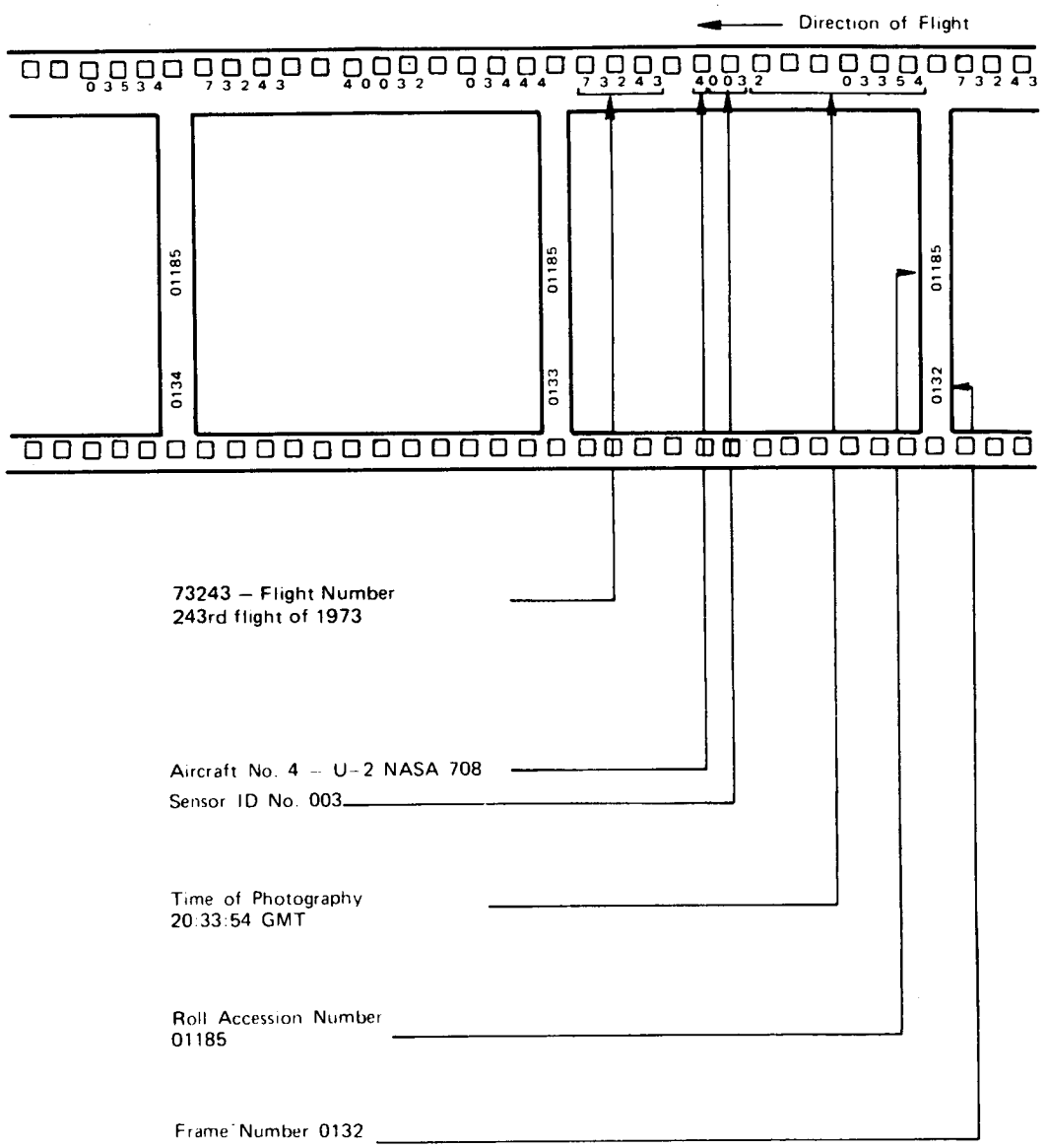


Figure 1-1. Vinten Camera System Data Annotation

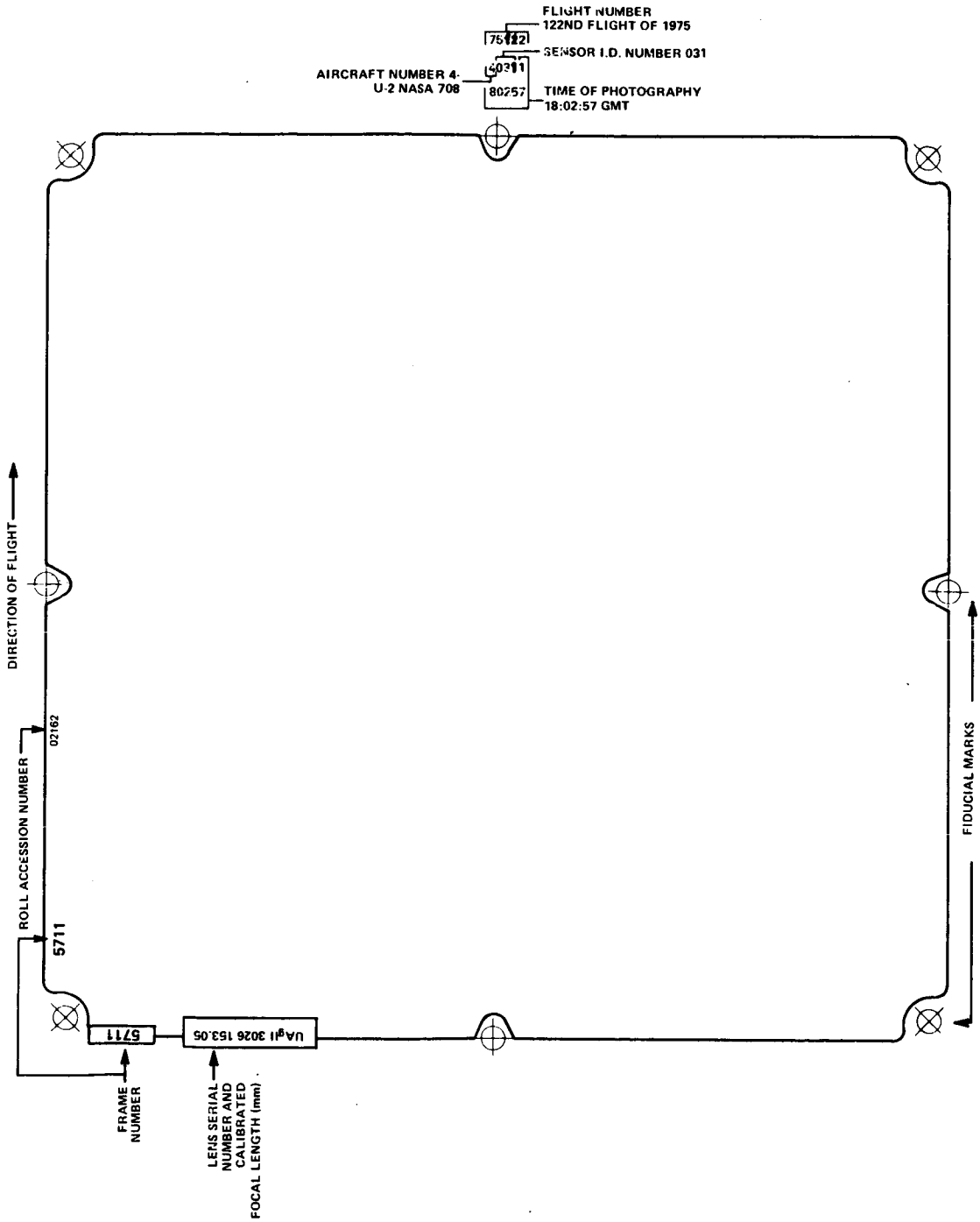


Figure 1-2. RC-10 Camera Data Annotation

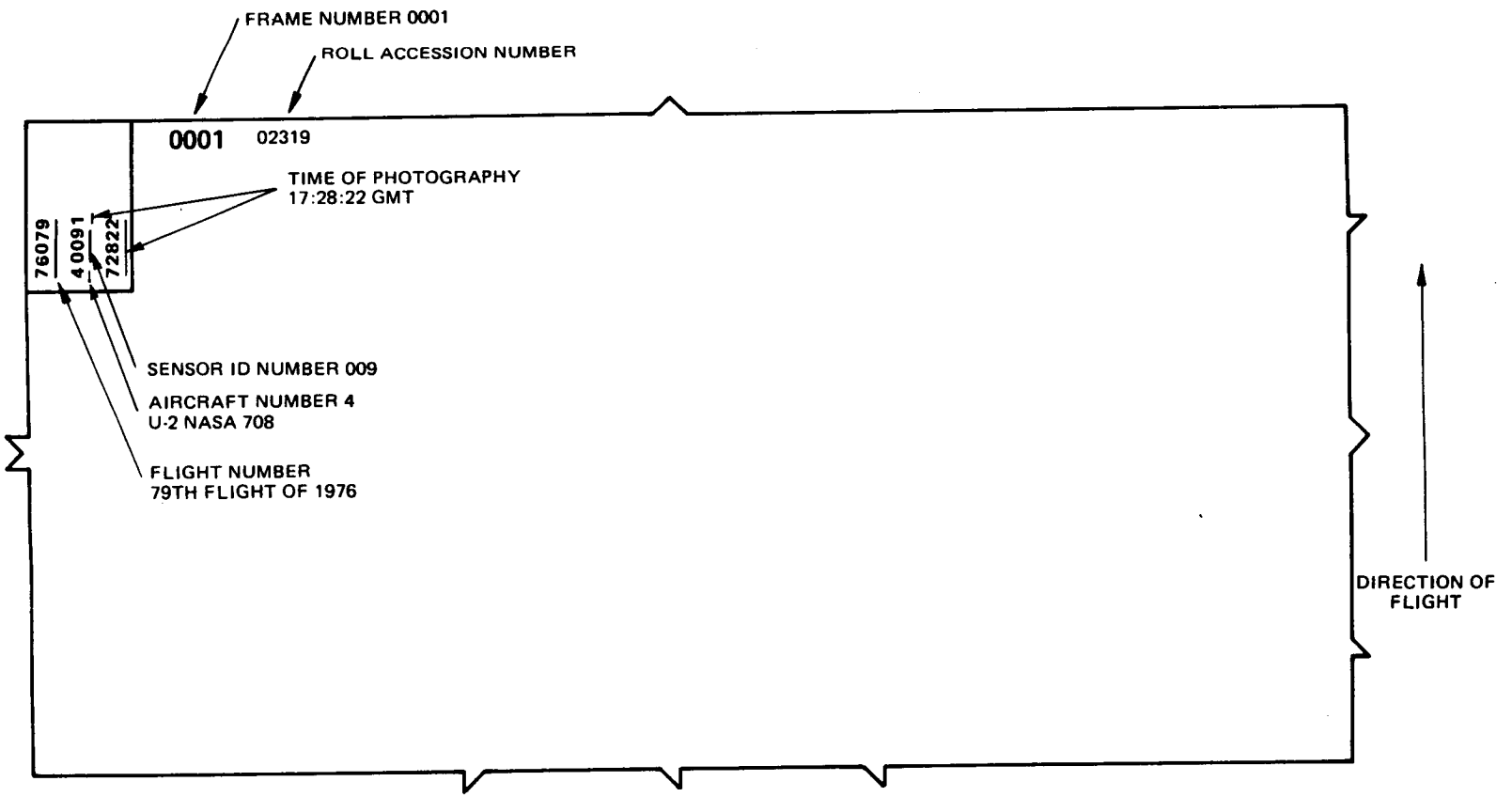


Figure 1-3. HR-732 Camera Data Annotation

2. AIRP FLIGHT COVERAGE.

This section contains information pertaining to the photographic data obtained by the Project during the catalog period only. It serves the user as a reference for determining the location and scale of the photographic data acquired during the period 1 January through 30 September 1980.

2.1 Data Coverage by State.

Table 2-1 is a cross-reference listing by state for photographic data flights accomplished during this catalog period. Non-photographic data flights are not listed.

Table 2-1. Flight Listing Cross Referenced by State

Alaska	California	Indiana	New Mexico
80-089	80-112	80-039	80-156
80-090	80-123	80-048	80-157
80-091	80-141		80-158
80-092	80-148	Kentucky	
80-094	80-150	80-034	North Carolina
80-095	80-159	80-037	80-030
80-098		80-039	
80-099	Colorado		Oregon
80-100	80-081	Louisiana	80-045A
80-108	80-082	80-014	80-045B
80-110	80-102	80-015	80-085
	80-121		80-086
Arizona	80-122	Minnesota	80-104
80-070	80-146	80-042	80-109
80-156	80-156	80-044	80-112
	80-157	80-046	80-119
Arkansas	80-158	80-047	
80-053		80-049	South Carolina
	Georgia	80-054	80-006
California	80-006	80-155	80-030
80-020			
80-021	Idaho	Nebraska	South Dakota
80-024	80-084	80-041A	80-041B
80-068	80-086		80-049
80-073	80-152	Nevada	80-050
80-080		80-103	
80-109		80-149	

Table 2-1. --Continued

Tennessee	Wyoming
80-027	80-050
80-030	
80-034	

Texas

80-005
80-012
80-013
80-016
80-052

Utah

80-145
80-156

Washington

80-028
80-045B
80-056
80-062
80-078
80-084
80-086
80-104
80-105
80-109

3. FLIGHT SUMMARIES

FLIGHT SUMMARY REPORT

Flight No: 80-005

Date: 17 January 1980

FSR No: 1362

Julian Date: 017

Sensor Package: RC-10

Aircraft No: 5

Purpose of Flight: #0774 Support
Requestor: Shelton

Area(s) Covered: Rio Grande / Pecos Rivers, Texas

SENSOR DATA

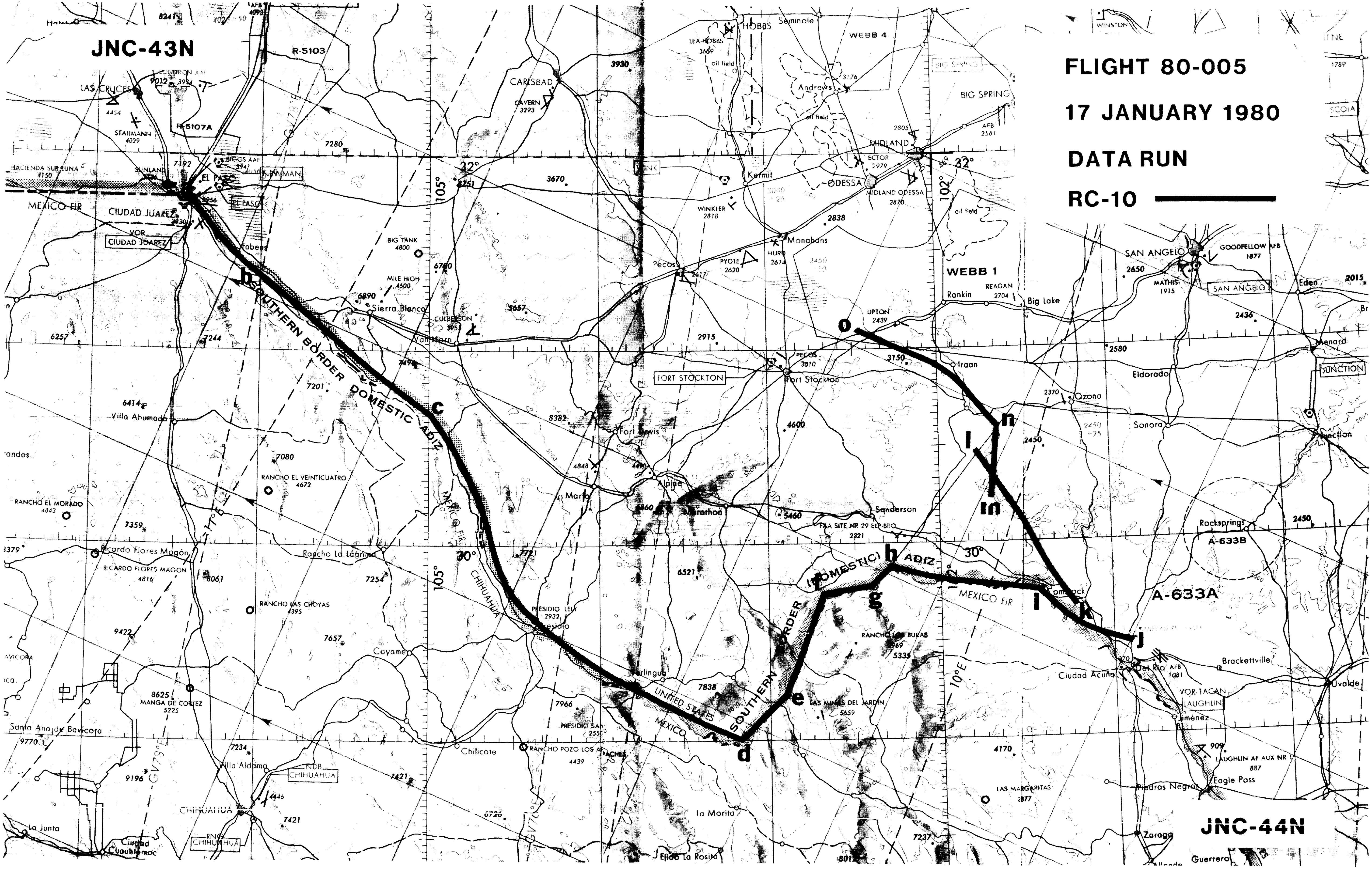
Accession No:	02851
Sensor ID No:	026
Sensor Type:	RC-10
Focal Length:	12" 304.97mm
Film Type:	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .20B
Spectral Band:	510-900nm
f Stop:	4
Shutter Speed:	1/125
No. of Frames:	188
% Overlap:	60
Quality:	Excellent
Remarks:	---

FLIGHT SUMMARY

80-005

This flight was flown in support of Flight Request #0774 (Shelton, EPA) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was obtained over Texas along the Rio Grande River from El Paso to Del Rio and along the Pecos River from the Rio Grande to 31°N Latitude (see Track Map).

The weather was clear throughout the flight except for some minor cumulus near Del Rio. Occasional minor traces of processing residue were noted (see Flight Line Data). The quality of the photography is rated excellent with no camera or processing malfunctions noted.



JNC-43N
FLIGHT 80-005
17 JANUARY 1980
DATA RUN
RC-10
JNC-44N
SOUTHERN BORDER DOMESTIC ADIZ
UNITED STATES
MEXICO
MEXICO FIR
CHIHUAHUA
(DOMESTIC) ADIZ
SOUTHERN BORDER
WEBB 1
WEBB 4
A-633A
A-633B
R-5103
R-5107A
LAS CRUCES
EL PASO
CIUDAD JUAREZ
Fabens
Sierra Blanca
Van Horn
CARLSBAD
HOBBS
Seminole
Andrews
BIG SPRING
MIDLAND
ODESSA
Kermit
Monahans
Pecos
FORT STOCKTON
Fort Stockton
Fort Davis
Alpine
Marfa
Marathon
Sanderson
Presidio
Terlingua
Upton
Iraan
Ozona
Big Lake
Rankin
SAN ANGELO
GOODFELLOW AFB
Eldorado
Sonora
Junction
Menard
Rocksprings
Comstock
Del Rio
Ciudad Acuña
Brackettville
Uvalde
Eagle Pass
Piedras Negras
Villa Ahumada
Chihuahua
Coyame
Chilicote
La Morita
Villa Aldama
La Junta
a b c d e f g h i j k l m n o

FLIGHT SUMMARY REPORT

Flight No: 80-006

Date: 19 January 1980

FSR No: 1363

Julian Date: 019

Sensor Package: Dual RC-10

Aircraft No: 5

Purpose of Flight: #0842 Support
Requestor: Weber
#0834 Support
Requestor: Anderson

Area(s) Covered: South Carolina and Georgia

SENSOR DATA

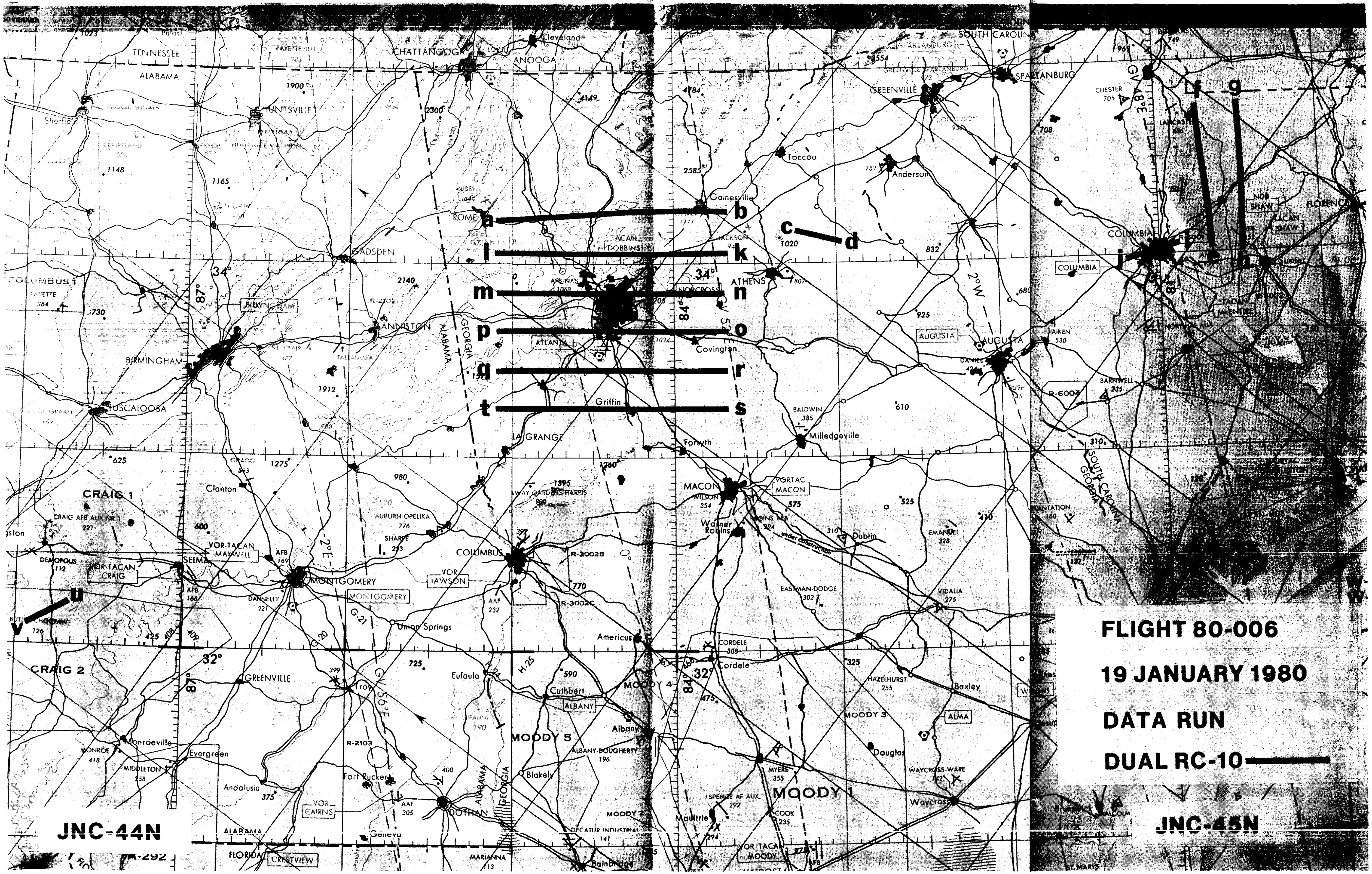
Accession No:	02852	02853
Sensor ID No:	035	036
Sensor Type:	RC-10	RC-10
Focal Length:	6" 153.46mm	6" 153.19mm
Film Type:	Panatomic-X, 3400	High Definition Aerochrome Infrared, SO-131
Filtration:	Wratten 25 + 2.2AV	CC .20B + 2.2AV
Spectral Band:	580-700nm	510-900nm
f Stop:	4	4
Shutter Speed:	1/100	1/75
No. of Frames:	86	85
% Overlap:	60	60
Quality:	Fair	Excellent
Remarks:	Soft focus on edge	---

FLIGHT SUMMARY

80-006

This flight was flown is support of Flight Requests #0842 (Weber, USFS) and #0834 (Anderson, USGS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over Georgia (Anderson) and South Carolina (Weber) in addition to incidental frames between the areas (see Track Map).

Both areas were relatively clear except for some minor cirrus (see Flight Line Data). A filter problem on RC-10 #035 resulted in a soft focus around the frame edge and only a fair quality rating. Also, sensitometric stepwedges were not printed on the black and white photography. The color infrared is excellent quality. No other camera or processing malfunctions were noted.


FLIGHT 80-006
19 JANUARY 1980
DATA RUN
DUAL RC-10
JNC-44N
JNC-45N
TENNESSEE
ALABAMA
GEORGIA
SOUTH CAROLINA
CHATTANOOGA
HUNTSVILLE
GADSDEN
BIRMINGHAM
TUSCALOOSA
ANNISTON
ROME
ATLANTA
Gainesville
ATHENS
Covington
Griffin
LA GRANGE
Forsyth
Milledgeville
MACON
Dublin
COLUMBUS
MONTGOMERY
SELMA
Union Springs
Americus
Cordele
Albany
DOTHAN
Eufaula
Troy
GREENVILLE
Evergreen
Andalusia
Monroeville
Waycross
Douglas
Baxley
AUGUSTA
GREENVILLE
SPARTANBURG
Anderson
Toccoa
COLUMBIA
CRAIG 1
CRAIG 2
MOODY 1
MOODY 3
MOODY 4
MOODY 5
a
b
c
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f
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FLIGHT SUMMARY REPORT

Flight No: 80-007

Date: 22 January 1980

FSR No: 1364

Julian Date: 022

Sensor Package: Daedalus Multispectral Scanner (DMS)

Aircraft No: 4

Purpose of Flight: #0806 Support
Requestor: Colwell

Area(s) Covered: California

SENSOR DATA

Accession No:	---
Sensor ID No:	059
Sensor Type:	DMS
Focal Length:	---
Film Type:	---
Filtration:	---
Spectral Band:	.38 - 1.10μm 10.4 - 12.5μm
f Stop:	---
Shutter Speed:	---
No. of Frames:	---
% Overlap:	---
Quality:	---
Remarks:	Tape data only

FLIGHT SUMMARY

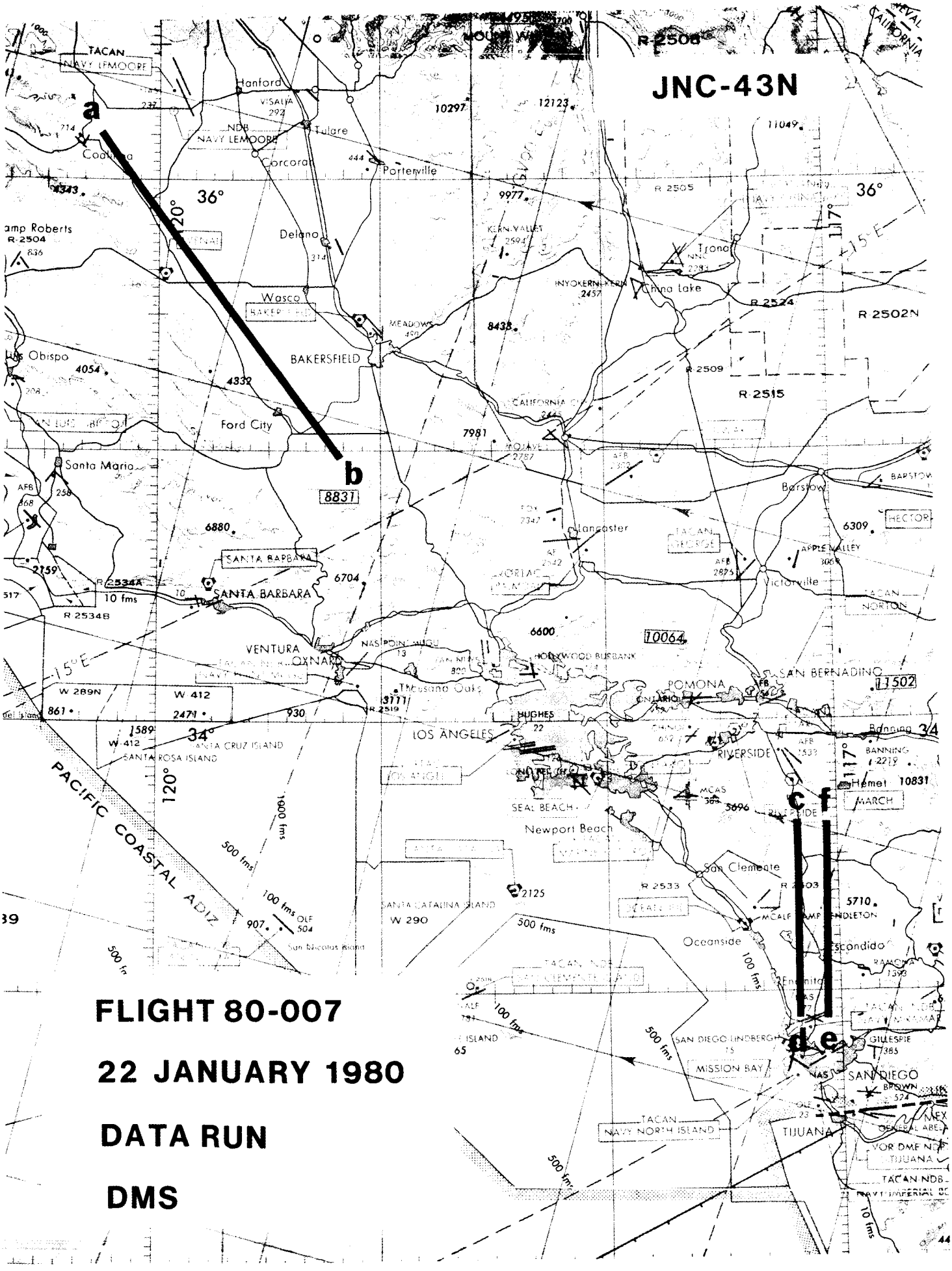
80-007

This flight was flown in support of Flight Request #0806 (Colwell, University of California, Berkeley) under the FY 1980 Airborne Instrumentation Research Program (AIRP). Daedalus Multispectral Scanner (DMS) data was acquired over central and southern California (see Track Map).

The Daedalus Multispectral Scanner is a modified Daedalus DEI-1260 eleven channel scanner. The system is entirely digital, with ten channels in the visible and near visible portions of the spectrum and one channel in the thermal infrared region. The scanner has an IFOV of either 1.25 or 2.5 milliradians depending on the scanhead utilized. Flight data tapes are ground processed to produce computer compatible tapes. Sensor specifications are:

IFOV	1.25mrad	2.5mrad
Pixels/scan line	715	715
Scan angle	42°	85°
Swath width	8nm	18nm
Scan rate	10 lines/sec	10 lines/sec
Resolution (from 65,000 ft)	80 ft	160 ft

Channel 1	.38 - .42um	Channel 7	.65 - .69um
Channel 2	.42 - .45um	Channel 8	.70 - .79um
Channel 3	.45 - .50um	Channel 9	.80 - .89um
Channel 4	.50 - .55um	Channel 10	.90 - 1.10um
Channel 5	.55 - .60um	Channel 11	10.40 - 12.50um
Channel 6	.60 - .65um		


JNC-43N
a
b
c
d
e
f
FLIGHT 80-007
22 JANUARY 1980
DATA RUN
DMS

FLIGHT SUMMARY REPORT

Flight No: 80-012

Date: 26 February 1980

FSR No: 1365

Julian Date: 057

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0744 Support
Requestor: Shelton
#0047 Support
Requestor: Ferry

Area(s) Covered: Northeast Texas

SENSOR DATA

Accession No:	02854	---
Sensor ID No:	026	024
Sensor Type:	RC-10	APS
Focal Length:	12" 304.97mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/125	---
No. of Frames:	209	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

FLIGHT SUMMARY

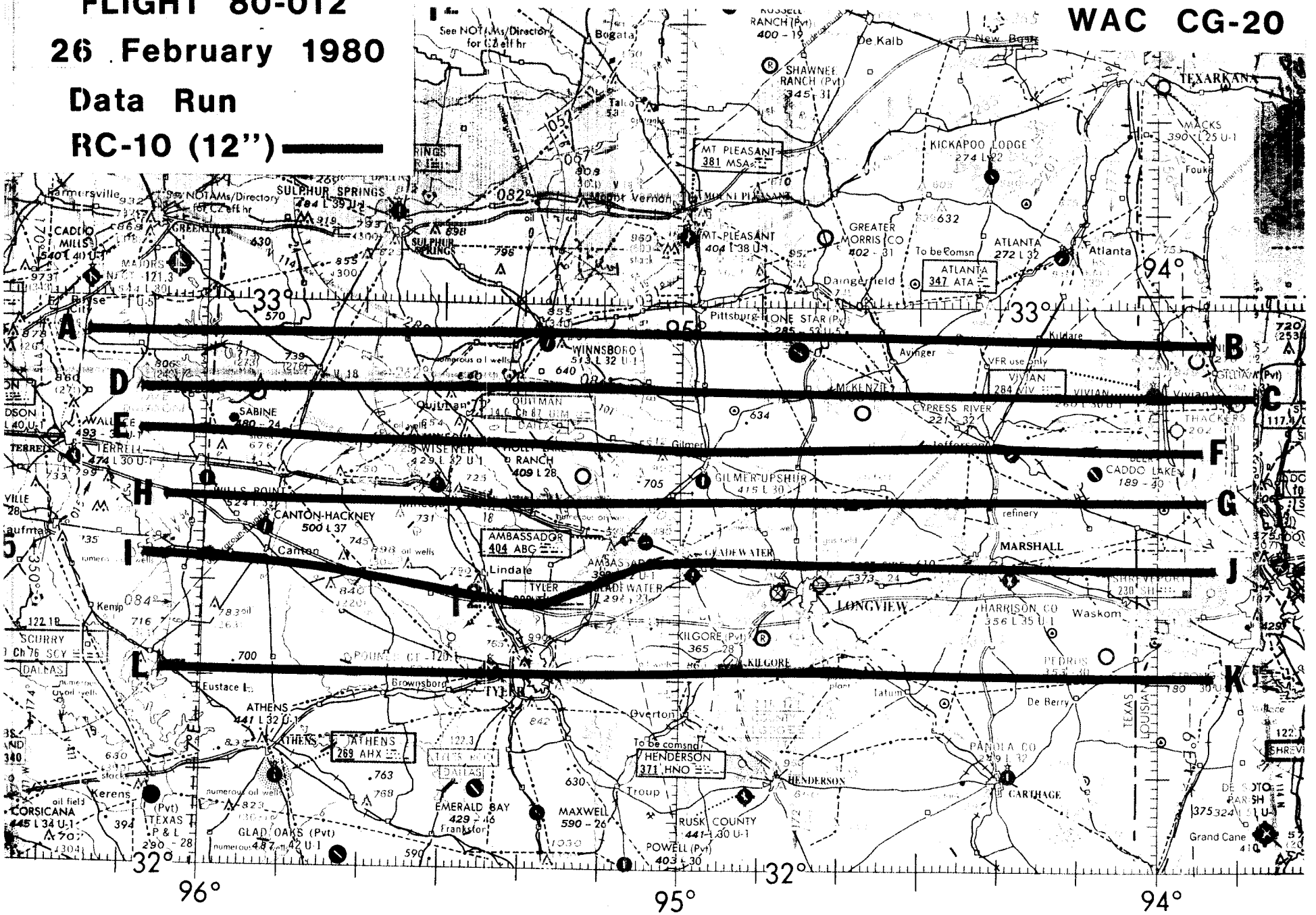
80-012

This flight was flown in support of Flight Requests #0774 (Shelton/ EPA) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The RC-10 12" camera was utilized to acquire photography over northeastern Texas. Aerosol Particulate Sampler (APS) data was collected throughout the flight but is not depicted on the track map.

The entire area flown was clear. Frames 0525 and 0526 were double exposed and removed from the roll. No other camera or processing malfunctions were noted and the quality of the photography is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.

FLIGHT 80-012
26 February 1980
Data Run
RC-10 (12")



FLIGHT SUMMARY REPORT

Flight No: 80-013

Date: 28 February 1980

FSR No: 1366

Julian Date: 059

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0774 Support
Requestor: Shelton
#0047 Support
Requestor: Ferry

Area(s) Covered: Northeast Texas

SENSOR DATA

Accession No:	02855	---
Sensor ID No:	026	024
Sensor Type:	RC-10	APS
Focal Length:	12" 304.97mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/125	---
No. of Frames:	365	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

FLIGHT SUMMARY

80-013

This flight was flown in support of Flight Requests #0774 (Shelton, EPA) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The RC-10 12" camera was utilized to acquire photography over northeastern Texas. Aerosol Particulate Sampler (APS) data was collected throughout the flight but is not indicated on the track map.

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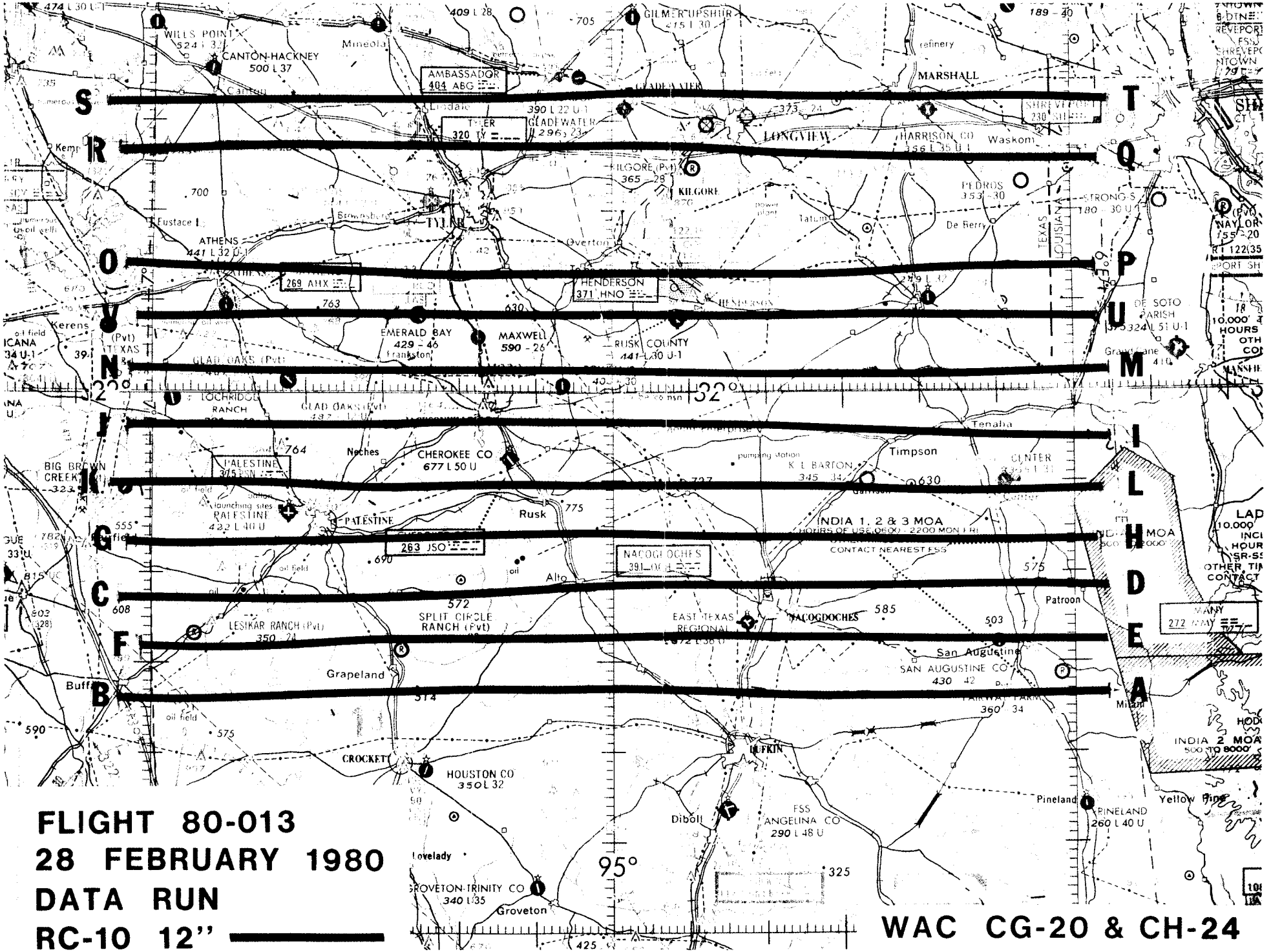


FLIGHT 80-013
28 FEBRUARY 1980
DATA RUN
RC-10 12"

WAC CG-20 & CH-24

FLIGHT SUMMARY REPORT

Flight No: 80-014

Date: 2 March 1980

FSR No: 1367

Julian Date: 062

Sensor Package: Itek Optical Bar Panoramic Camera
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0853 Support
Requestor: Weber
#0047 Support
Requestor: Ferry

Area(s) Covered: Louisiana

SENSOR DATA

Accession No:	02856	---
Sensor ID No:	029	024
Sensor Type:	Optical Bar	APS
Focal Length:	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20B	---
Spectral Band:	510-900nm	---
f Stop:	3.5	---
Shutter Speed:	1/250	---
No. of Frames:	1156	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

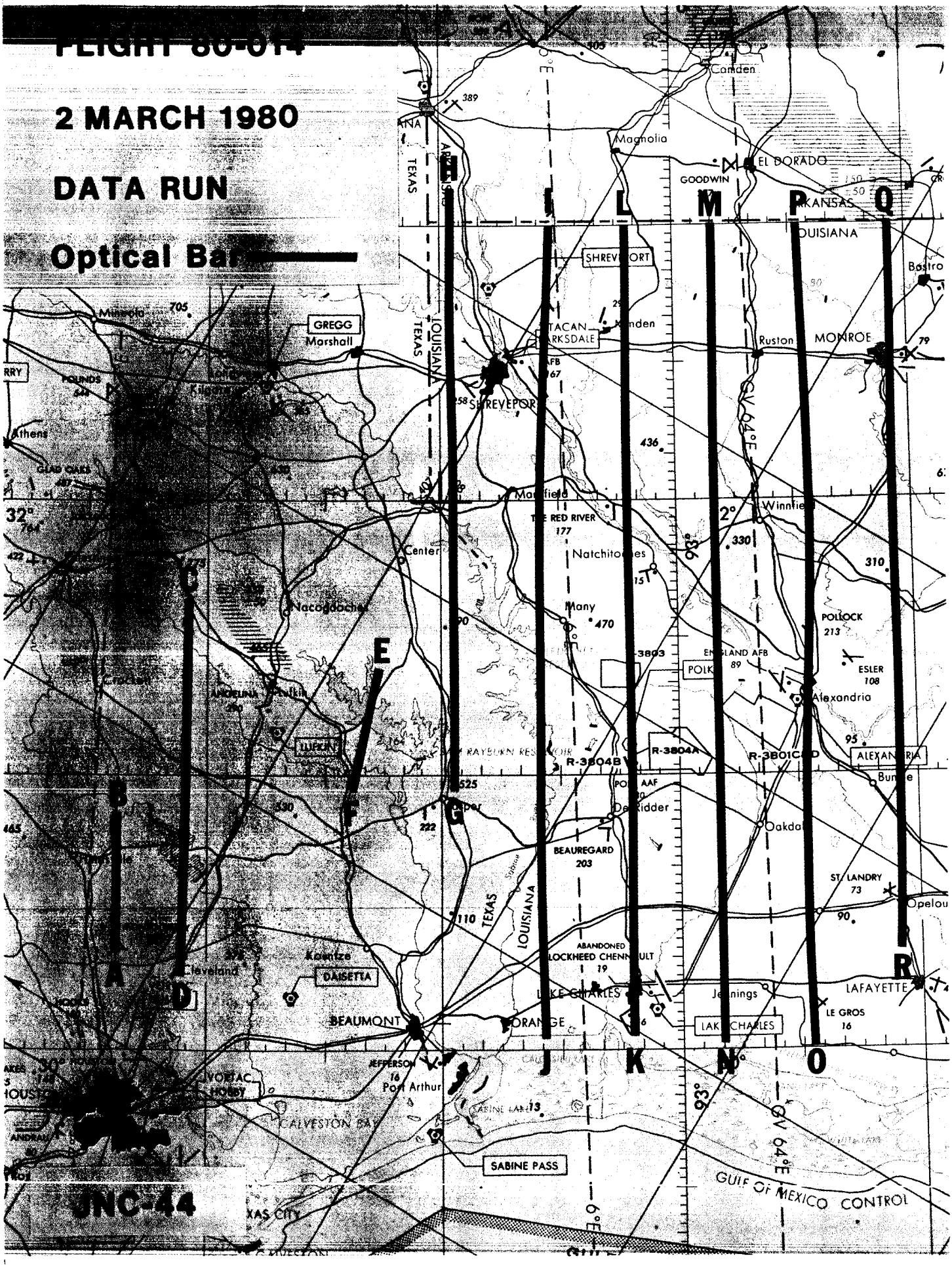
FLIGHT SUMMARY

80-014

This flight was flown in support of Flight Requests #0853 (Weber, USFS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Panoramic photography was acquired over Louisiana (see Track Map). Aerosol Particulate Sampler (APS) data was collected throughout the flight although not indicated on the track map.

The weather was clear throughout the flight. Except for a minor film wrinkle near the end of the flight, the photography is excellent quality with no camera or processing malfunctions noted. Since the camera ran out of film, no tail was available for printing sensitometic stepwedges.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


FLIGHT 80-014
2 MARCH 1980
DATA RUN
Optical Ba
UNC-44
Camden
Magnolia
EL DORADO
GOODWIN
SHREVEPORT
Bastrop
Ruston
MONROE
Minnola
GREGG
Marshall
Athens
Mansfield
Winnfield
Natchitoches
Many
Center
Nacogdoches
POLLOCK
ESLER
Alexandria
ENGLAND AFB
R-3804B
R-3804A
R-3801C
ALEXANDRIA
DeRidder
Oakdale
BEAUREGARD
ST. LANDRY
Opelousas
ABANDONED LOCKHEED CHENNAULT
LAKE CHARLES
LAFAYETTE
LE GROS
Jennings
Cleveland
DAISETTA
BEAUMONT
ORANGE
JEFFERSON
Port Arthur
SABINE PASS
GULF OF MEXICO CONTROL
TEXAS
LOUISIANA
ARKANSAS
A
B
C
D
E
F
G
J
K
L
M
N
O
P
Q
R
93°
64°E
32°
30°

FLIGHT SUMMARY REPORT

Flight No: 80-015

Date: 3 March 1980

FSR No: 1368

Julian Date: 063

Sensor Package: Itek Optical Bar Panoramic Camera
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0853 Support
Requestor: Weber
#0047 Support
Requestor: Ferry

Area(s) Covered: Louisiana

SENSOR DATA

Accession No:	02857	---
Sensor ID No:	029	024
Sensor Type:	Optical Bar	APS
Focal Length:	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20B	---
Spectral Band:	510-900nm	---
f Stop:	3.5	---
Shutter Speed:	1/250	---
No. of Frames:	242	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

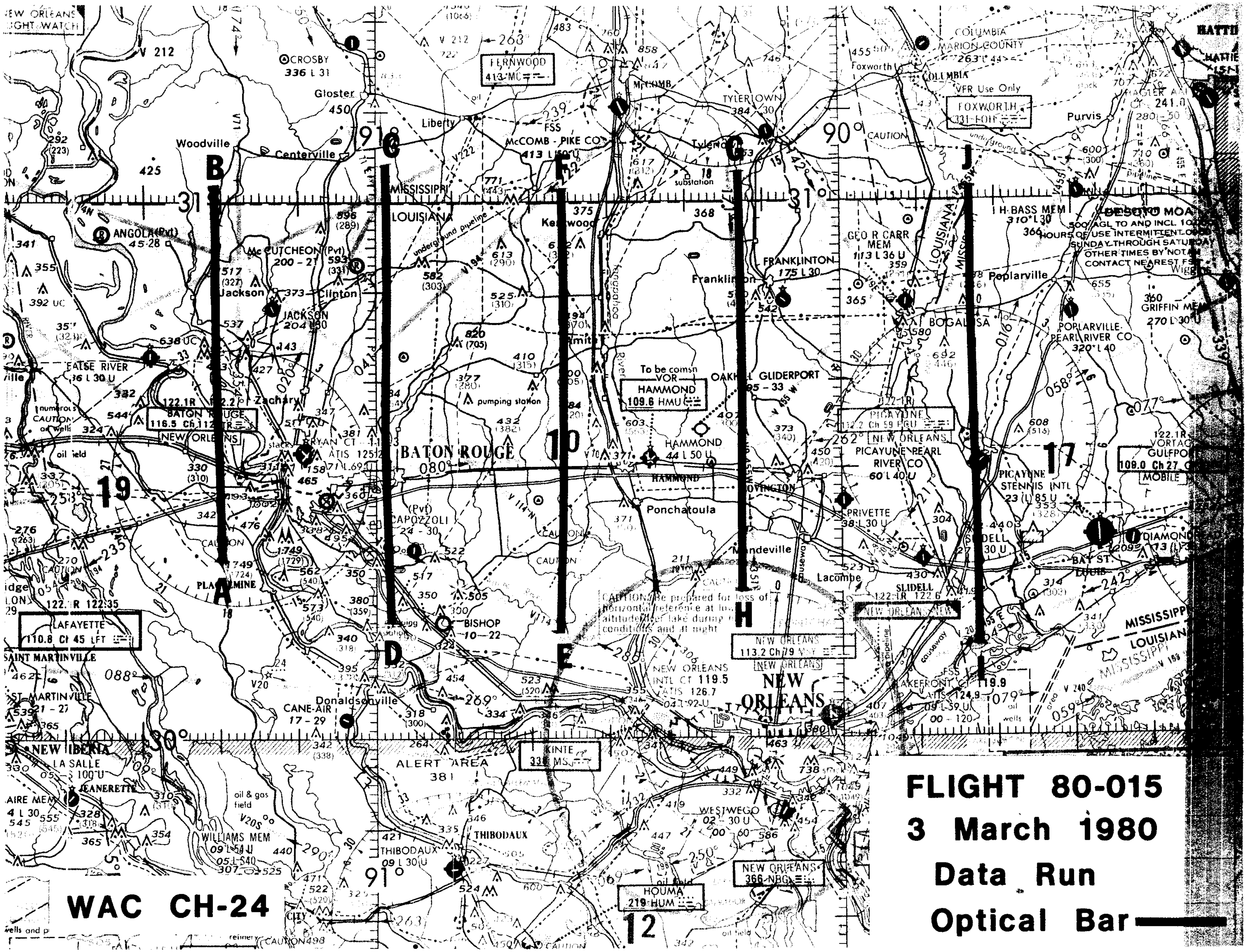
FLIGHT SUMMARY

80-015

This flight was flown in support of Flight Requests #0853 (Weber, USFS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Optical Bar data was acquired over NE Louisiana (see Track Map). Additionally, Aerosol Particulate Sampler (APS) data was collected throughout the flight at altitude, but is not depicted on the track map.

The entire area was cloud-free. Minor obscuration is present over isolated areas due to smoke from slash burning. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



FLIGHT 80-015

3 March 1980

Data Run

Optical Bar

FLIGHT SUMMARY REPORT

Flight No: 80-016

Date: 5 March 1980

FSR No: 1369

Julian Date: 065

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0774 Support
Requestor: Shelton
#0047 Support
Requestor: Ferry

Area(s) Covered: Rio Grande River, Texas

SENSOR DATA

Accession No:	02858	---
Sensor ID No:	026	024
Sensor Type:	RC-10	APS
Focal Length:	12" 304.97mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/125	---
No. of Frames:	108	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

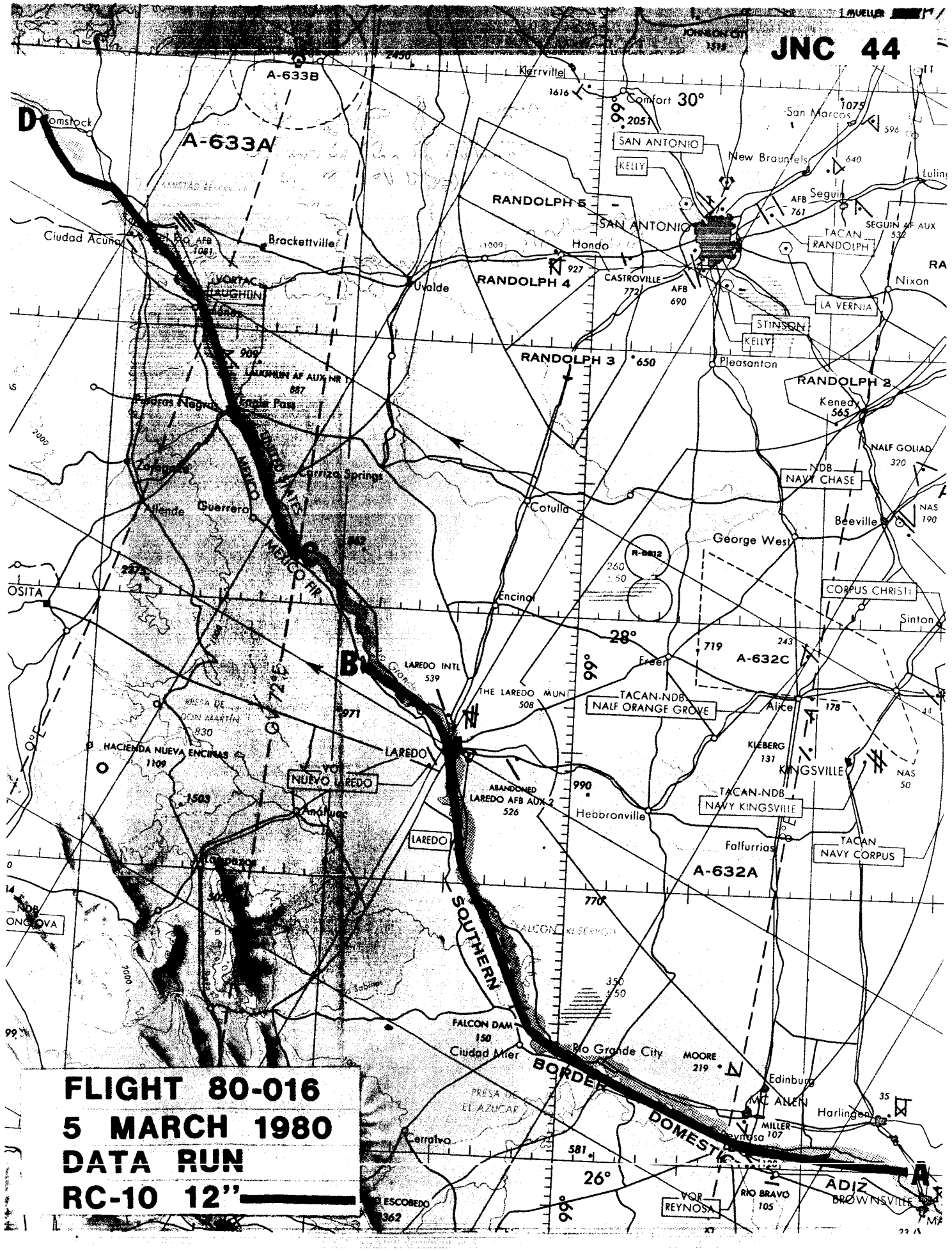
FLIGHT SUMMARY

80-016

This flight was flown in support of Flight Requests #0774 (Shelton, EPA) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The RC-10 12" camera was utilized to acquire photography over the Rio Grande River, Texas. Aerosol Particulate Sampler (APS) data was collected throughout the flight but is not indicated on the track map.

Minor cirro-cumulus clouds were encountered throughout the flight (see Flight Line Data). No camera or processing malfunctions were noted and the quality of the photography is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



FLIGHT 80-016
5 MARCH 1980
DATA RUN
RC-10 12"

FLIGHT SUMMARY REPORT

Flight No: 80-020 **Date:** 17 March 1980

FSR No: 1372 **Julian Date:** 077

Sensor Package: A-4 Configuration **Aircraft No:** 5

Purpose of Flight: #0857 Support
Requestor: Washburn

Area(s) Covered: Lake Elsinore, CA

SENSOR DATA

Accession No:	02859	02860
Sensor ID No:	026	039
Sensor Type:	RC-10	HR-732
Focal Length:	12" 304.97mm	24" 609.6mm
Film Type:	Panatomic X, 3400	Aerochrome Infrared, SO-193
Filtration:	Wratten 12	Wratten 12
Spectral Band:	510-700nm	510-900nm
f Stop:	8	11
Shutter Speed:	1/100	1/360
No. of Frames:	43	71
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

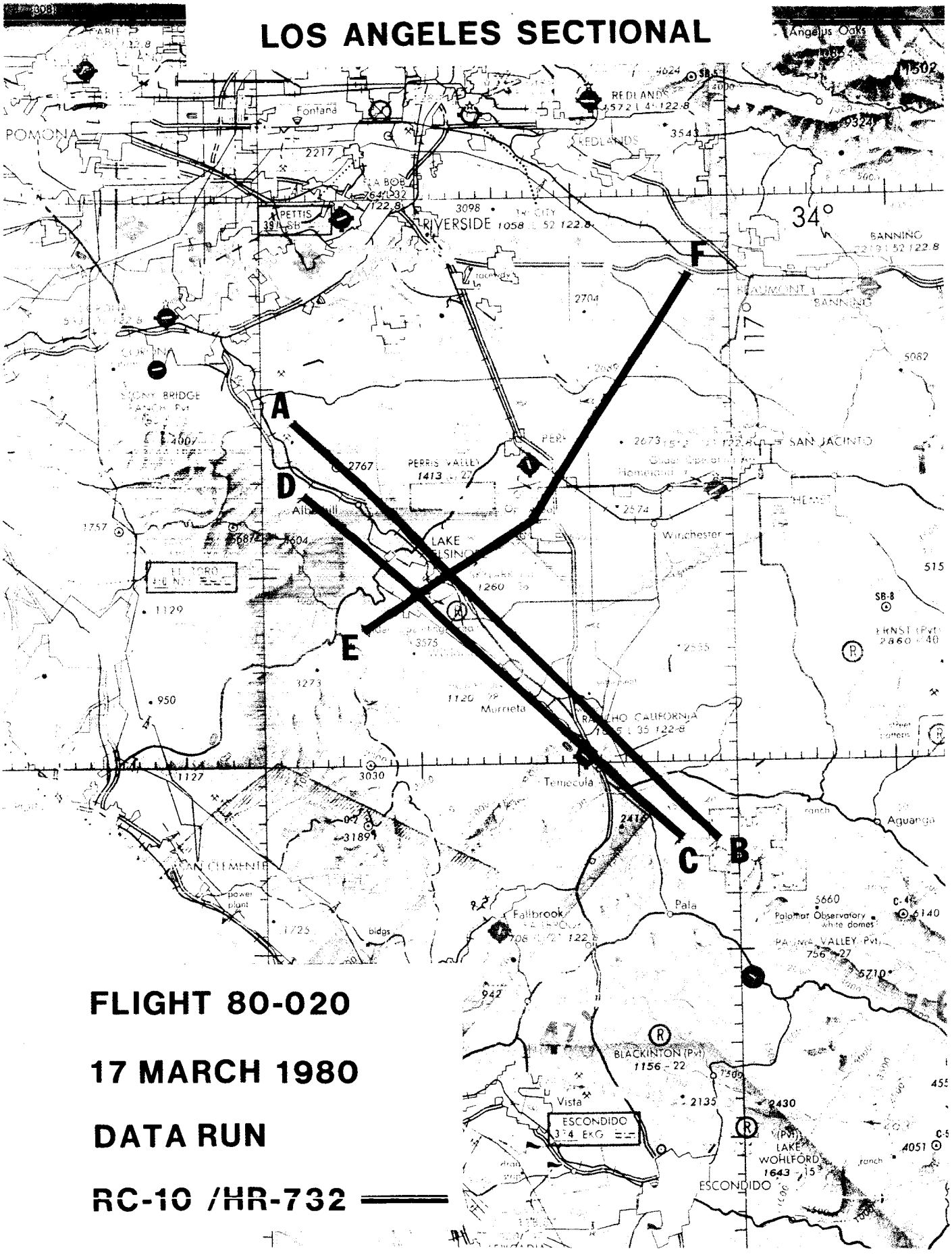
FLIGHT SUMMARY

80-020

This flight was flown in support of Flight Request #0857 (Washburn, City of Lake Elsinore) in support of flood damage assessment. Dual camera coverage was obtained over Lake Elsinore and the Murrieta Creek area in southern California (see Track Map). Additional frames were acquired over Palmdale and Lancaster but are not shown on the track map.

The entire area was cloud-free. Because of strong cross-winds severe crab and moderate drift were apparent. No processing or camera malfunctions were noted and the quality of the data is rated excellent. The frames over Palmdale and Lancaster are over exposed due to the higher albedo encountered.

LOS ANGELES SECTIONAL



FLIGHT 80-020

17 MARCH 1980

DATA RUN

RC-10 /HR-732

FLIGHT SUMMARY REPORT

Flight No: 80-021

Date: 19 March 1980

FSR No: 1373

Julian Date: 079

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0698 Support
Requestor: Pitts
#0047 Support
Requestor: Ferry

Area(s) Covered: California

SENSOR DATA

Accession No:	02861	---
Sensor ID No:	023	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.21mm	---
Film Type:	High Definition Aerochrome Infrared, SO-127	---
Filtration:	CC .10B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/100	---
No. of Frames:	45	---
% Overlap:	Variable - single pulsed data	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

FLIGHT SUMMARY

80-021

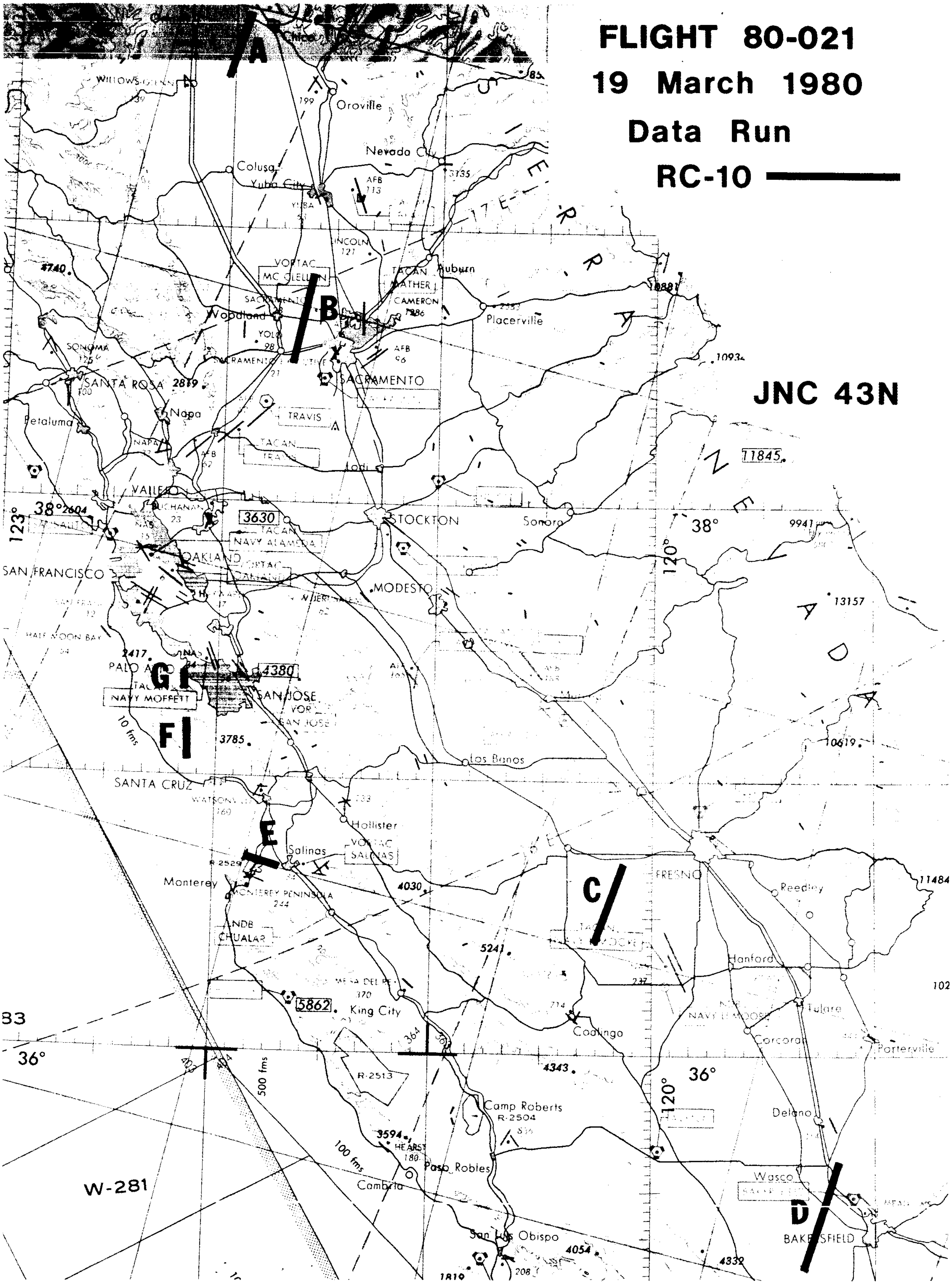
This flight was flown in support of Flight Requests #0698 (Pitts, NASA/JSC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. RC-10 coverage was obtained over selected sites in the central valley of California. Additionally, bonus coverage was obtained over the Monterey Bay and Santa Cruz mountains (see Track Map). Aerosol Particulate Sampler (APS) data was collected for a short duration at altitude, but is not depicted on the track map.

All areas flown were cloud-free. Minor residue from the pre-hardener was deposited on isolated frames during processing. Additionally, the LED annotation malfunctioned and, consequently, the times listed on the flight line data are estimated from the pilot's log. No other camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.

FLIGHT 80-021
19 March 1980
Data Run
RC-10

JNC 43N



FLIGHT SUMMARY REPORT

Flight No: 80-024 **Date:** 28 March 1980

FSR No: 1376 **Julian Date:** 088

Sensor Package: Daedalus Multispectral Scanner (DMS) **Aircraft No:** 5
Vinten / Aerosol Particulate Sampler (APS)

Purpose of Flight: #0666 Support
Requestor: Lumb
#0047 Support
Requestor: Ferry

Area(s) Covered: Greater San Francisco Bay Area, California

SENSOR DATA

Accession No:	---	02862	---
Sensor ID No:	059	014	024
Sensor Type:	DMS	Vinten	APS
Focal Length:	---	1-3/4" 44.5mm	---
Film Type:	---	High Definition Aerochrome Infrared, SO-127	---
Filtration:	---	CC .10B	---
Spectral Band:	.38 - 1.10um 10.4 - 12.5um	510-900nm	---
f Stop:	---	4	---
Shutter Speed:	---	1/250	---
No. of Frames:	---	185	---
% Overlap:	---	60	---
Quality:	---	Excellent	---
Remarks:	Tape data only	---	Non-imaging sensor

FLIGHT SUMMARY

80-024

This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ARC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Daedalus Multispectral Scanner (DMS) data and Vinten tracking camera photography were collected over the greater San Francisco Bay (ABAG) area. Additionally, APS data was collected throughout the flight, but is not dipicted on the track map.

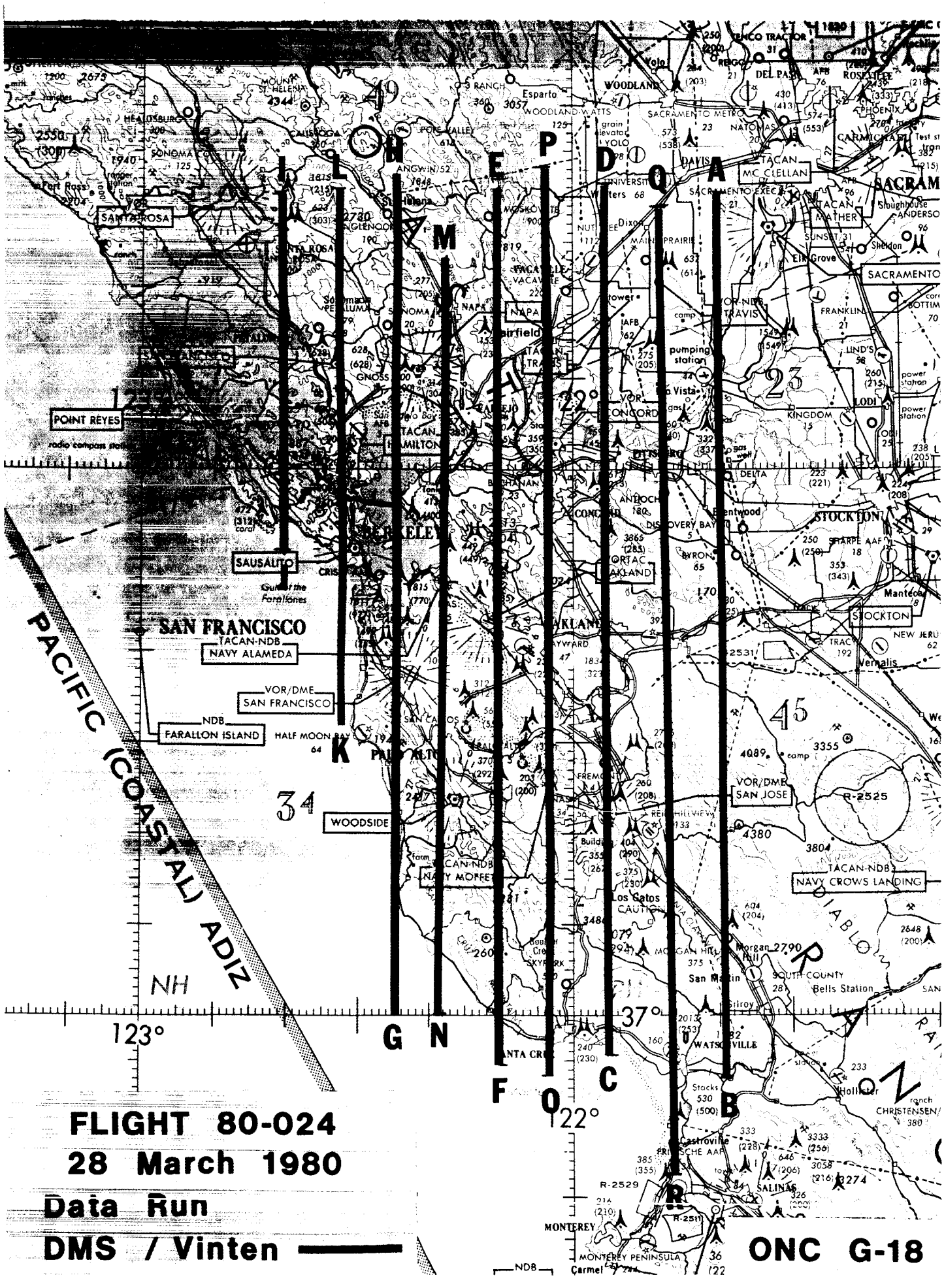
The daedalus scanner data was collected utilizing the 1.25 mrad detectors. Photographic tracking camera data was acquired on all data lines. Because the tracking camera provides no data annotation, the times listed on the Flight Line data are taken from the pilot's log. No processing or camera problems were noted and the quality is rated excellent.

The Daedalus Multispectral Scanner is a modified Daedalus DEI-1260 eleven channel scanner. The system is entirely digital, with ten channels in the visible and near visible portions of the spectrum and one channel in the thermal infrared region. The scanner has an IFOV of either 1.25 or 2.5 milliradians depending on the scanhead utilized. Flight data tapes are ground processed to produce computer compatible tapes. Sensor specifications are:

IFOV	1.25mrad	2.5mrad
Pixels/scan line	715	715
Scan angle	42°	85°
Swath width	8nm	18nm
Scan rate	10 lines/sec	10 lines/sec
Resolution (from 65,000 ft)	80 ft	160 ft

Channel 1	38 - 42um	Channel 7	.65 - .69um
Channel 2	.42 - .45um	Channel 8	.70 - .79um
Channel 3	.45 - .50um	Channel 9	80 - .89um
Channel 4	.50 - .55um	Channel 10	90 - 1.10um
Channel 5	.55 - .60um	Channel 11	10.40 - 12.50um
Channel 6	.60 - .65um		

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



FLIGHT 80-024
28 March 1980
Data Run
DMS / Vinten

ONC G-18

FLIGHT SUMMARY REPORT

Flight No: 80-027

Date: 5 April 1980

FSR No: 1379

Julian Date: 096

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0779 Support
Requestor: Anderson
#0047 Support
Requestor: Ferry

Area(s) Covered: Western Tennessee

SENSOR DATA

Accession No:	02866	---
Sensor ID No:	036	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.19mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/75	---
No. of Frames:	198	---
% Overlap:	60	---
Quality:	Good	---
Remarks:	---	Non-imaging sensor

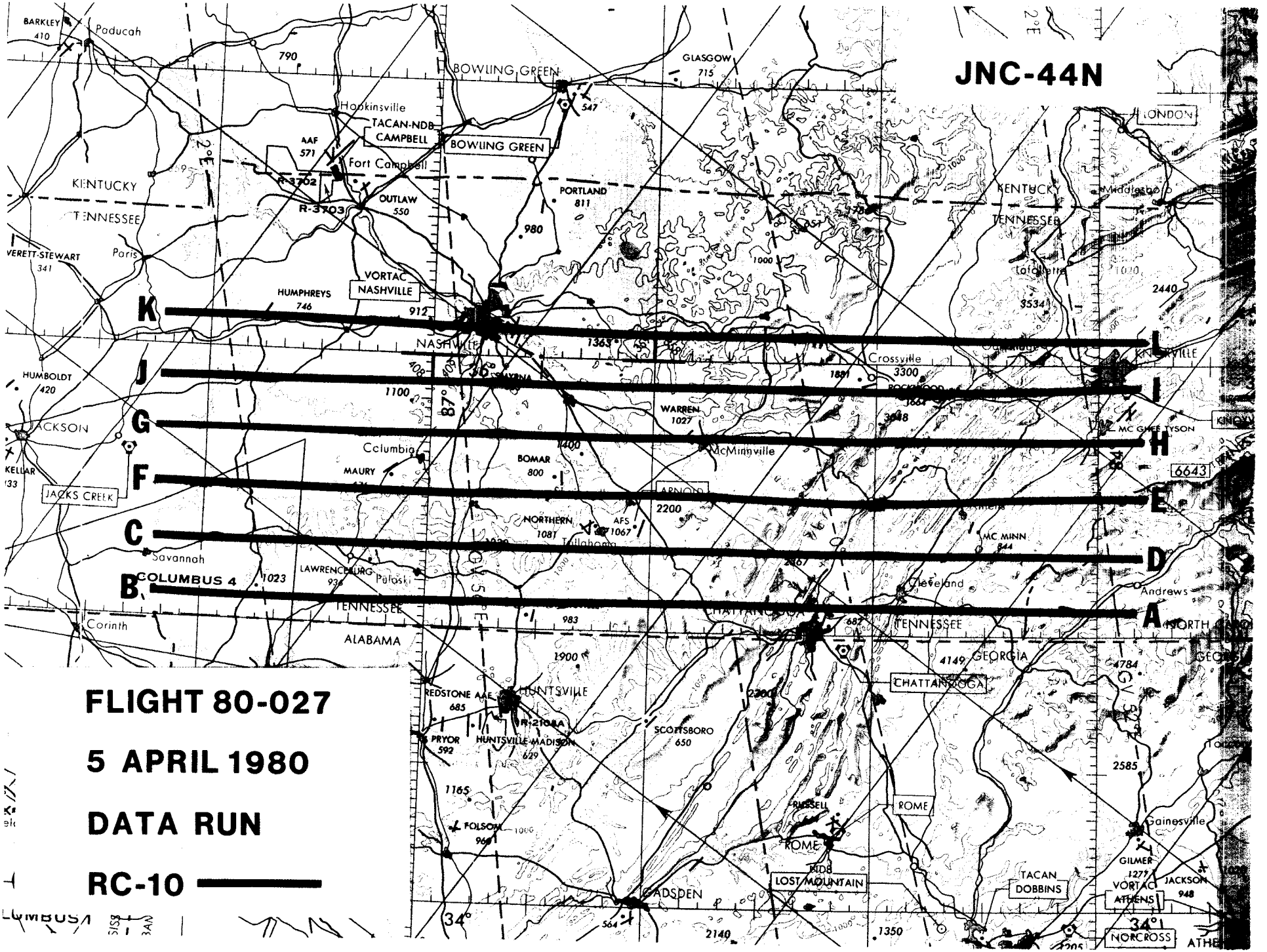
FLIGHT SUMMARY

80-027

This flight was flown in support of Flight Requests #0779 (Anderson, USGS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over western Tennessee (see Track Map). Additionally, Aerosol Particulate Sampler (APS) data was collected throughout the flight. Due to the extensive area covered, APS data is not indicated on the track map.

Minor scattered cumulus clouds were encountered on all flight lines. Due to a warped color correction filter, the leading edge of each frame has a soft focus. Additionally, occasional traces of processing residue were noted throughout the photography. The photography acquired is good quality with no other camera or processing problems noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


JNC-44N
K
L
J
I
G
H
F
E
C
D
B
A
FLIGHT 80-027
5 APRIL 1980
DATA RUN
RC-10
BARKLEY
Paducah
BOWLING GREEN
GLASGOW
Hopkinsville
TACAN-NDB
CAMPBELL
AAF
Fort Campbell
R-3702
R-3703
OUTLAW
PORTLAND
LONDON
KENTUCKY
TENNESSEE
VERETT-STEWART
Paris
VORTAC
NASHVILLE
HUMPHREYS
NASHVILLE
Crossville
HUMBOLDT
JACKSON
WARREN
McMinnville
Columbia
MAURY
BOMAR
JACKS CREEK
ARNOLD
NORTHERN
AFS
MC MINN
Savannah
COLUMBUS 4
LAWRENCEBURG
Pulaski
Cleveland
Andrews
Corinth
ALABAMA
CHATTANOOGA
GEORGIA
REDSTONE AAF
HUNTSVILLE
PRYOR
HUNTSVILLE-MADISON
SCOTTSBORO
FOLSOM
RUSSELL
ROME
Gainesville
GILMER
JACKSON
LOST MOUNTAIN
TACAN
DOBBINS
VORTAC
ATHENS
GADSDEN
NORCROSS
34°

FLIGHT SUMMARY REPORT

Flight No: 80-028

Date: 2 April 1980

FSR No: 1378

Julian Date: 093

Sensor Package: A-3 Configuration

Aircraft No: 4

Purpose of Flight: #0666 Support
Requestor: Lumb

Area(s) Covered: Mt. St. Helens, Washington

SENSOR DATA

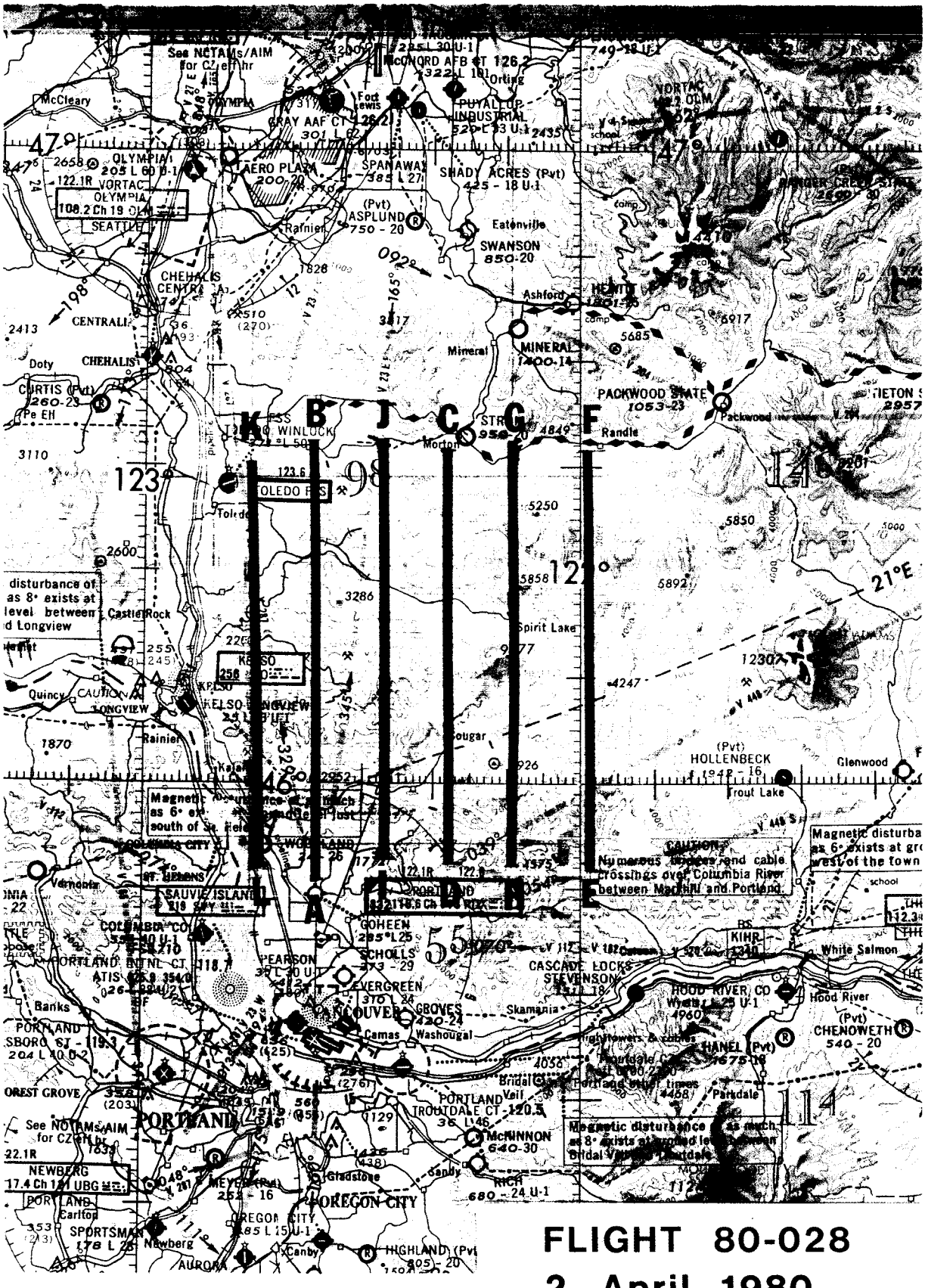
Accession No:	02863	02864	02865
Sensor ID No:	018	019	020
Sensor Type:	HR 732	HR 732	HR 732
Focal Length:	24" 609.6mm	24" 609.6mm	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-127	Natural Color, SO-242	Panatomic X, 3400
Filtration:	CC .10B	NONE	Wratten 12
Spectral Band:	510-900nm	400-700nm	510-700nm
f Stop:	8	8	8
Shutter Speed:	1/75	1/75	1/75
No. of Frames:	141	141	141
% Overlap:	60	60	60
Quality:	Excellent	Good	Excellent
Remarks:	---	Over-exposed	---

FLIGHT SUMMARY

80-028

This flight was flown in support of Flight Request #0666 (Lumb, NASA/ ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. A-3 Configuration coverage was obtained over the Mt. St. Helens area in Washington (see Track Map). The photographic coverage is to assess mudflows and volcanic ash distribution caused by the eruption of Mt. St. Helens.

Minor to heavy cumulus cloud was encountered throughout the flight. Because of extensive cloudcover to the east, two additional lines were not flown. The SO-242 natural color roll was slightly overexposed due to heavy haze encountered. A minor shutter malfunction caused loss of approximately 1 1/2 frames on the first line. The quality of the color infrared and panchromatic black and white is rated excellent. The natural color is rated good.



FLIGHT 80-028

2 April 1980

Data Run

A-3 Configuration

WAC CF-16

FLIGHT SUMMARY REPORT

Flight No: 80-030 **Date:** 6 April 1980

FSR No: 1380 **Julian Date:** 097

Sensor Package: Itek Optical Bar
Aerosol Particulate Sampler (APS) **Aircraft No:** 5

Purpose of Flight: #0835 Support
Requestor: Weber
#0047 Support
Requestor: Ferry

Area(s) Covered: South Carolina, North Carolina/Tennessee border

SENSOR DATA

Accession No:	02959	---
Sensor ID No:	029	024
Sensor Type:	Itek Optical Bar	APS
Focal Length:	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20B	---
Spectral Band:	510-900nm	---
f Stop:	3.5	---
Shutter Speed:	1/250	---
No. of Frames:	144	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

FLIGHT SUMMARY

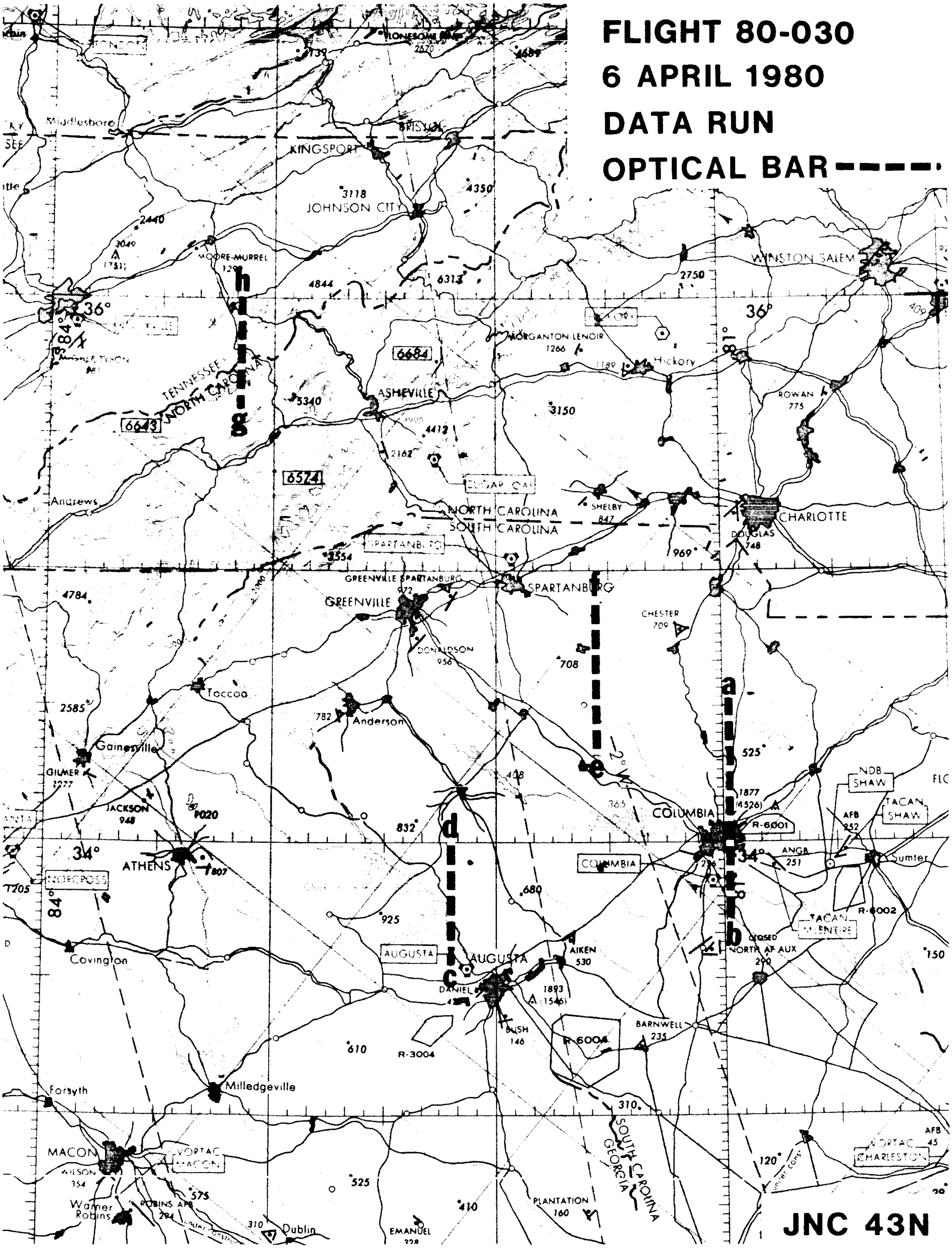
80-030

This flight was flown in support of Flight Requests #0835 (Weber, USFS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The flight provides Optical Bar photography over areas of South Carolina and a small section of the North Carolina/Tennessee border (see Track Map). Aerosol Particulate Sampler (APS) data was collected for the full time above 60,000 feet. No track map for the APS collection is provided due to the extensive area of coverage.

Light to heavy cirrus and cumulus cloud cover was experienced throughout the flight. additionally, due to a camera transport problem, only a portion of the entire scene area was photographed. Data blocks were exposed over some frames and light leaks were evident on others. Some minor processing residue was noted on the roll. Overall, the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.

FLIGHT 80-030
6 APRIL 1980
DATA RUN
OPTICAL BAR ----



JNC 43N

FLIGHT SUMMARY REPORT

Flight No: 80-033

Date: 15 April 1980

FSR No: 1383

Julian Date: 106

Sensor Package: Ocean Color Scanner (OCS)
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0814 Support
Requestor: McClain
#0047 Support
Requestor: Ferry

Area(s) Flown: Florida Coast

SENSOR DATA

Sensor ID No:	027	024
Sensor Type:	OCS	APS
Data Format:	Mag tape	Impact sampler
Sensor Position:	Lower eguipment bay	Wing pylon
Remarks:	Non-imaging sensor	Non-imaging sensor

FLIGHT SUMMARY

80-033

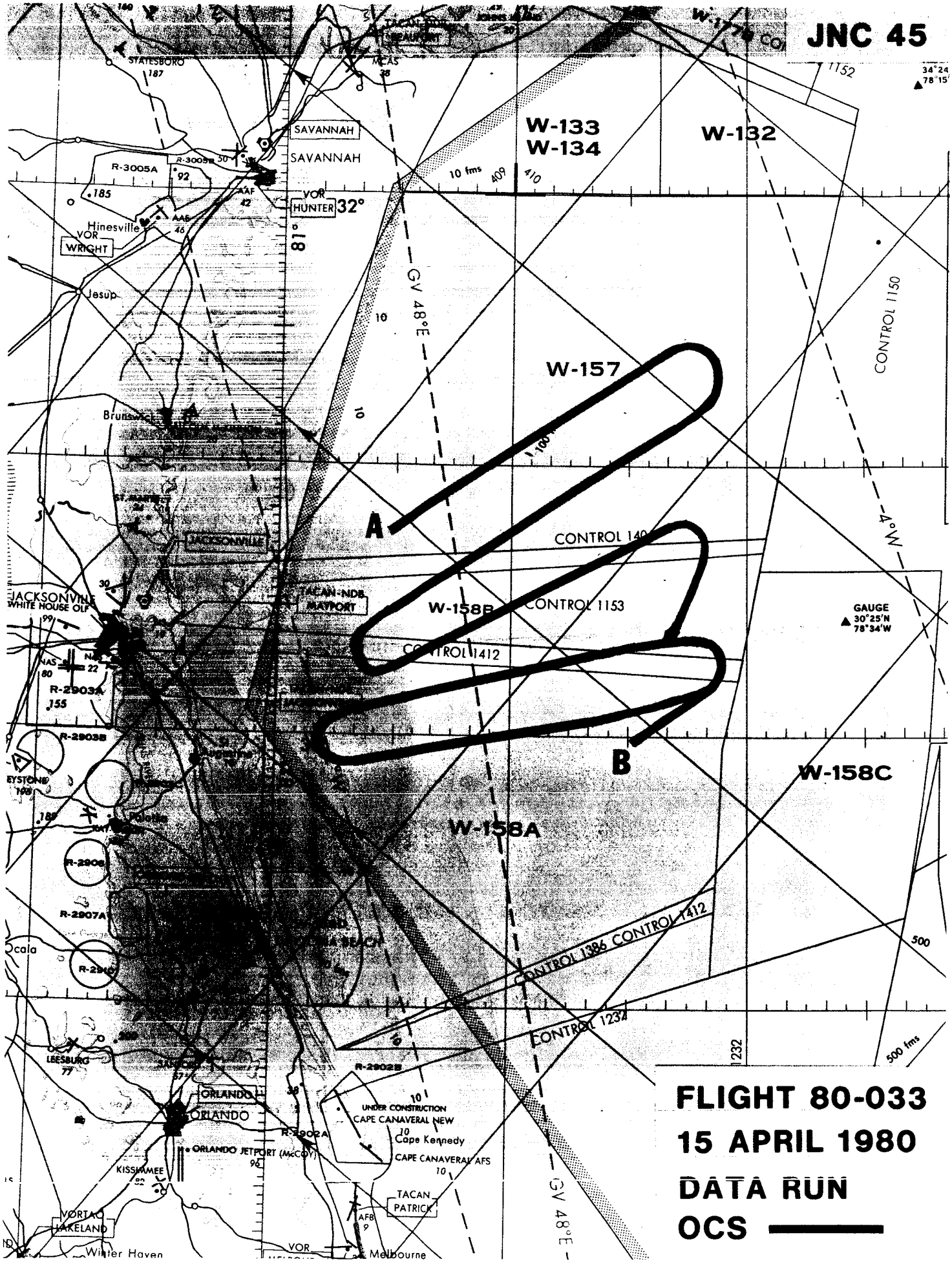
This flight was flown in support of Flight Requests #0814 (McClain, NASA/GSFC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Ocean Color Scanner (OCS) data was collected over the Atlantic Ocean offshore of Jacksonville, Florida (see Track Map). Aerosol Particulate Sampler (APS) data was acquired throughout the flight from level off to begin descent but is not depicted on the track map.

The OCS is a ten-channel multispectral scanner operated by Dr. W.L. Barnes, NASA/GSFC. It has a 90° total scan angle and spatial resolution of 3.5 milliradians. The peak wavelengths for the 10 channels are:

Band 1 - 427nm	Band 6 - 622nm
Band 2 - 465nm	Band 7 - 662nm
Band 3 - 500nm	Band 8 - 701nm
Band 4 - 544nm	Band 9 - 735nm
Band 5 - 582nm	Band 10- 774nm

The output of the scanner is recorded on one-inch, 14 track magnetic tape in analog form. Additionally, any four of the channels can also be recorded in digital format. All imagery processing and data reduction from this sensor will be accomplished at Goddard Space Flight Center, Greenbelt, Maryland.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


JNC 45
W-133
W-134
W-132
W-157
W-158B
W-158C
W-158A
A
B
SAVANNAH
VOR HUNTER 32°
Hinesville
VOR WRIGHT
Jesup
Brunswick
JACKSONVILLE
JACKSONVILLE WHITE HOUSE OLF
TACAN-NDB MAYPORT
CONTROL 1400
CONTROL 1153
CONTROL 1412
CONTROL 1386
CONTROL 1232
GV 48°E
CONTROL 1150
GAUGE 30°25'N 78°34'W
R-3005A
R-2903A
R-2903B
R-2908
R-2907A
R-2902B
R-2902A
ORLANDO
ORLANDO JETPORT (McCOY)
KISSIMMEE
LEESBURG
Ocala
UNDER CONSTRUCTION CAPE CANAVERAL NEW
Cape Kennedy
CAPE CANAVERAL AFS
TACAN PATRICK AFB
VORTAC LAKELAND
Winter Haven
Melbourne
FLIGHT 80-033
15 APRIL 1980
DATA RUN
OCS

FLIGHT SUMMARY REPORT

Flight No: 80-034

Date: 17 April 1980

FSR No: 1384

Julian Date: 108

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0779 Support (Anderson)
#0793 Support (Antenucci)
#0047 Support (Ferry)

Area(s) Covered: Tennessee and Kentucky

SENSOR DATA

Accession No:	02867	---
Sensor ID No:	036	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.19mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/75	---
No. of Frames:	209	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

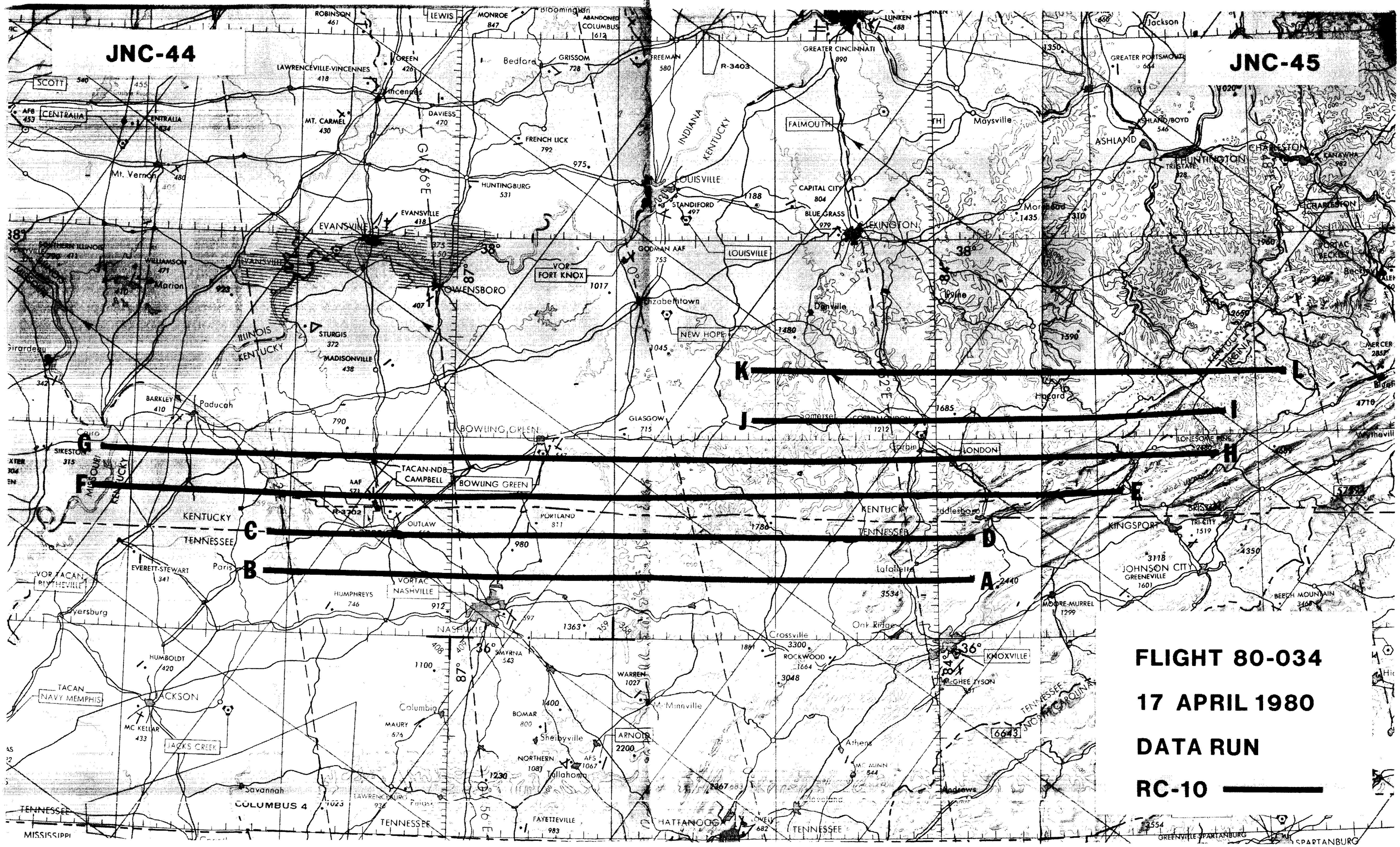
FLIGHT SUMMARY

80-034

This flight was flown in support of Flight Requests #0779 (Anderson, USGS), #0793 (Antenucci, Commowealth of Kentucky), and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over northern Tennessee and southern Kentucky (see Track Map). Additionally, Aerosol Particulate Sampler (APS) data was collected throughout the flight. Due to the extensive area covered, APS data is not indicated on the track map.

Minor to moderate cirrus clouds were encountered as noted in the Flight Line Data. The photography acquired is excellent quality with no camera or processing malfunctions noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


JNC-44
JNC-45
FLIGHT 80-034
17 APRIL 1980
DATA RUN
RC-10
A
B
C
D
E
F
G
H
I
J
K
L
EVANSVILLE
OWENSBORO
LOUISVILLE
LEXINGTON
NASHVILLE
KNOXVILLE
BOWLING GREEN
KENTUCKY
TENNESSEE
JOHNSON CITY
KINGSPORT
ASHLAND
HUNTINGTON
JACKSON
Paducah
LONDON
Crossville
Oak Ridge

FLIGHT SUMMARY REPORT

Flight No: 80-036 **Date:** 18 April 1980

FSR No: 1385 **Julian Date:** 109

Sensor Package: Daedalus Multispectral Scanner (DMS) **Aircraft No:** 4

Purpose of Flight: #0848 Support
Requestor: Bryant

Area(s) Covered: Southern California

SENSOR DATA

Accession No:	---
Sensor ID No:	059
Sensor Type:	DMS
Focal Length:	---
Film Type:	---
Filtration:	---
Spectral Band:	.38 - 1.10um 10.4 - 12.5um
f Stop:	---
Shutter Speed:	---
No. of Frames:	---
% Overlap:	---
Quality:	---
Remarks:	Tape data only

FLIGHT SUMMARY

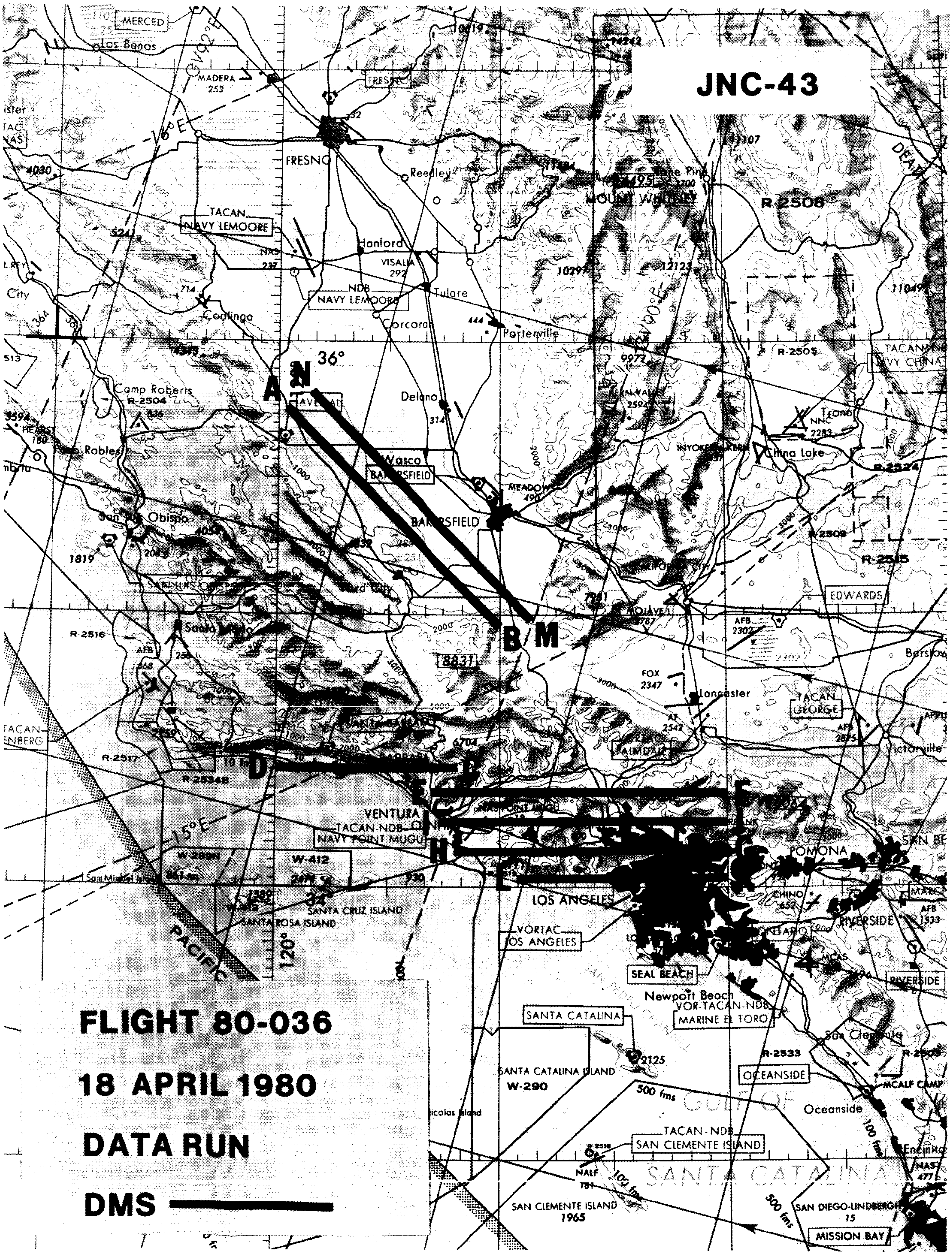
80-036

This flight was flown in support of Flight Request #0848 (Bryant, JPL) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Daedalus Multispectral Scanner (DMS) data was acquired during a flight over southern California (see Track Map).

The Daedalus Multispectral Scanner is a modified Daedalus DEI-1260 eleven channel scanner. The system is entirely digital, with ten channels in the visible and near visible portions of the spectrum and one channel in the thermal infrared region. The scanner has an IFOV of either 1.25 or 2.5 milliradians depending on the scanhead utilized. Flight data tapes are ground processed to produce computer compatible tapes. Sensor specifications are:

IFOV	1.25mrad	2.5mrad
Pixels/scan line	715	715
Scan angle	42°	85°
Swath width	8nm	18nm
Scan rate	10 lines/sec	10 lines/sec
Resolution (from 65,000 ft)	80 ft	160 ft

Channel 1	38 -	42um	Channel 7	65 -	69um
Channel 2	42	45um	Channel 8	70	79um
Channel 3	45	50um	Channel 9	80	89um
Channel 4	50	55um	Channel 10	90	1.10um
Channel 5	55	60um	Channel 11	10.40	12.50um
Channel 6	60 -	65um			



FLIGHT 80-036

18 APRIL 1980

DATA RUN

DMS ———

FLIGHT SUMMARY REPORT

Flight No: 80-037

Date: 19 April 1980

FSR No: 1386

Julian Date: 110

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0779 Support (Anderson)
#0793 Support (Antenucci)
#0047 Support (Ferry)

Area(s) Covered: Kentucky

SENSOR DATA

Accession No:	02868	---
Sensor ID No:	036	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.19mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/75	---
No. of Frames:	252	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

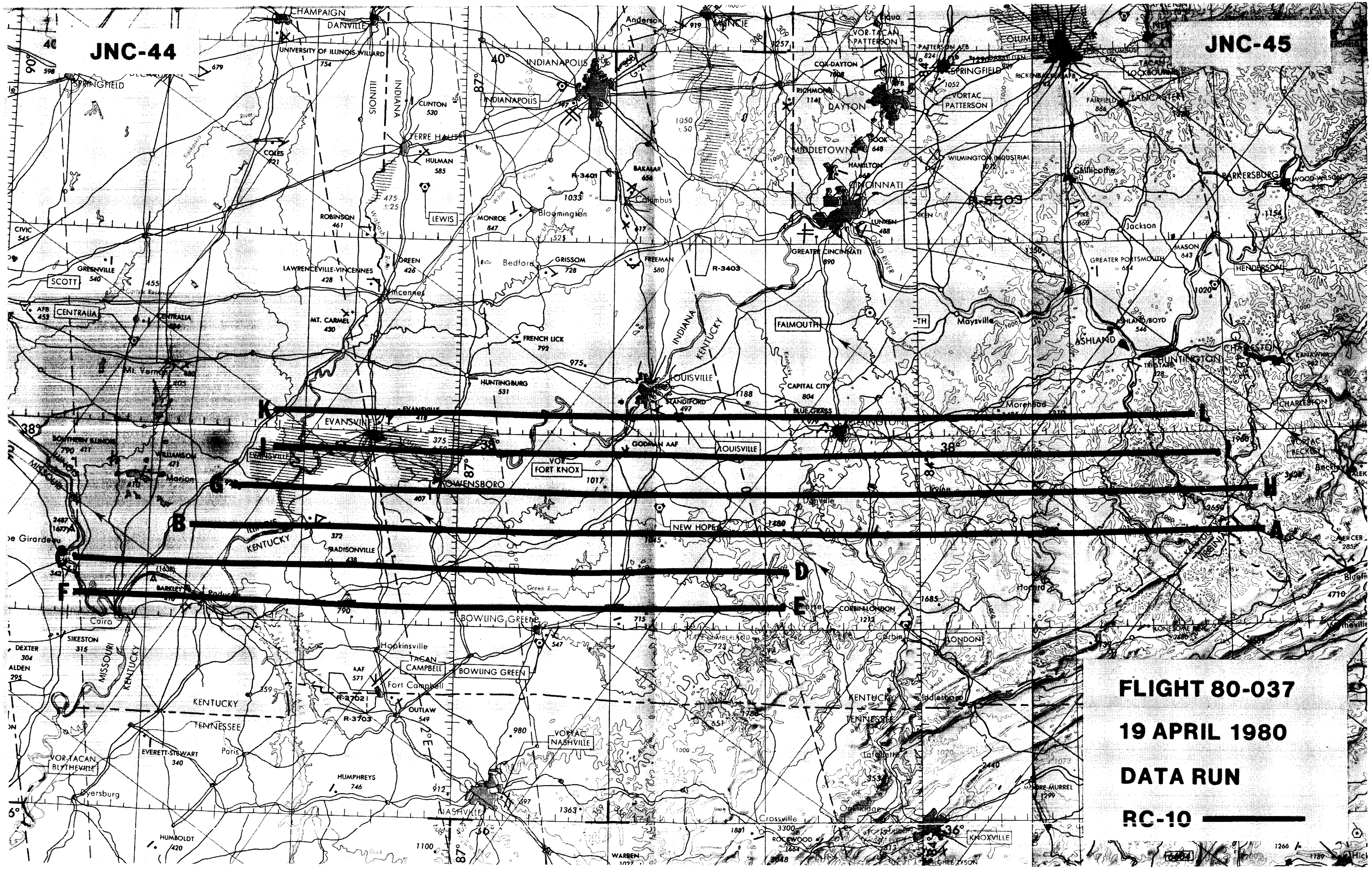
FLIGHT SUMMARY

80-037

This flight was flown in support of Flight Requests #0779 (Anderson, USGS), and #0793 (Antenucci, Commonwealth of Kentucky), and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research (AIRP) plan. Photography was acquired over Kentucky and portions of adjoining states (see Track Map). Also, Aerosol Particulate Sampler (APS) data was collected throughout the flight. Due to the extensive area covered by the flight, APS data is not indicated on the track map.

The entire area was clear. The photography acquired is of excellent quality with no camera or processing malfunctions noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



JNC-44
JNC-45
FLIGHT 80-037
19 APRIL 1980
DATA RUN
RC-10
A
B
C
D
E
F
G
H
J
K
L
INDIANAPOLIS
DAYTON
CINCINNATI
LOUISVILLE
EVANSVILLE
OWENSBORO
BOWLING GREEN
NASHVILLE
KENTUCKY
TENNESSEE
ILLINOIS
INDIANA

FLIGHT SUMMARY REPORT

Flight No: 80-038

Date: 20 April 1980

FSR No: 1387

Julian Date: 111

Sensor Package: Ocean Color Scanner (OCS)

Aircraft No: 5

Purpose of Flight: #0814 Support
Requestor: McClain

Area(s) Flown: Wallops Island, Virginia

SENSOR DATA

Sensor ID No: 027

Sensor Type: OCS

Data Format: Mag tape

Sensor Position: Lower equipment bay

Remarks: Tape data only

FLIGHT SUMMARY

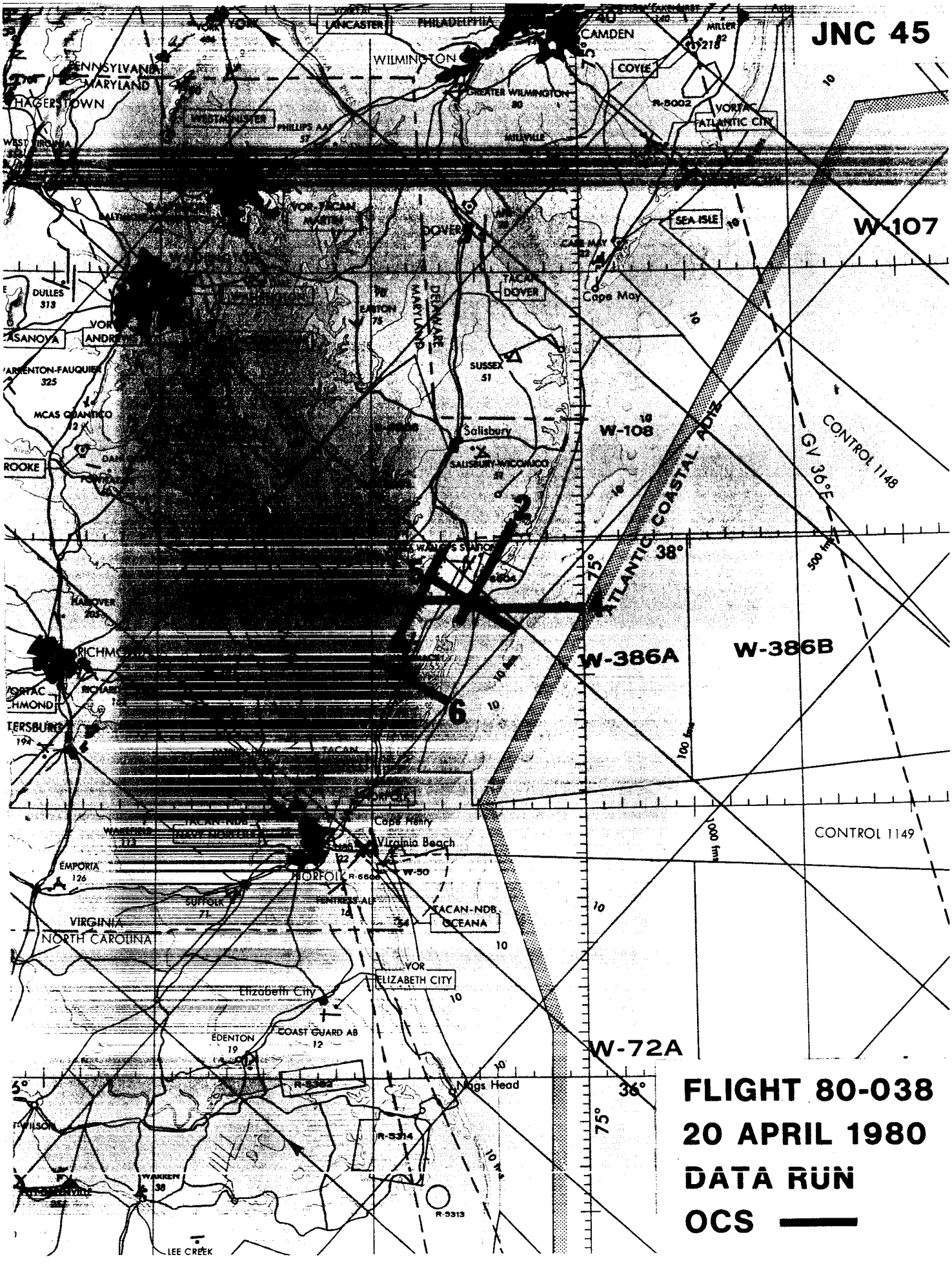
80-038

This flight was flown in support of Flight Request #0814 (McClain, NASA/GSFC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Ocean Color Scanner (OCS) data was acquired over the Wallops Island, Virginia area (see Track Map).

The OCS is a ten-channel multispectral scanner operated by Dr. W.L. Barnes, NASA/GSFC. It has a 90° total scan angle and spatial resolution of 3.5 milliradians. The peak wavelengths for the 10 channels are:

Band 1	427nm	Band 6	622nm
Band 2	465nm	Band 7	662nm
Band 3	500nm	Band 8	701nm
Band 4	544nm	Band 9 -	735nm
Band 5	582nm	Band 10-	774nm

The output of the scanner is recorded on one-inch, 14 track magnetic tape in analog form. Additionally, any four of the channels can also be recorded in digital format. All imagery processing and data reduction from this sensor will be accomplished at Goddard Space Flight Center, Greenbelt, Maryland.


JNC 45
W-107
W-108
W-386A
W-386B
W-72A
ATLANTIC COASTAL ADIZ
CONTROL 1148
CONTROL 1149
GV 36°E
500 fms
1000 fms
100 fms
FLIGHT 80-038
20 APRIL 1980
DATA RUN
OCS
YORK
LANCASTER
PHILADELPHIA
CAMDEN
WILMINGTON
COYLE
ATLANTIC CITY
PENNSYLVANIA
MARYLAND
HAGERSTOWN
WESTMINSTER
DOVER
SEA ISLE
Cape May
DULLES
ANDREWS
MCAS QUANTICO
SUSSEX
Salisbury
RICHMOND
Cape Henry
Virginia Beach
NORFOLK
OCEANA
VIRGINIA
NORTH CAROLINA
Elizabeth City
COAST GUARD AB
EDENTON
Nags Head
LEE CREEK
38°
36°
75°

FLIGHT SUMMARY REPORT

Flight No: 80-039

Date: 24 April 1980

FSR No: 1388

Julian Date: 115

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0779 Support
Requestor: Anderson
#0047 Support
Requestor: Ferry

Area(s) Covered: Kentucky and Indiana

SENSOR DATA

Accession No:	02869	---
Sensor ID No:	031	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.05mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/75	---
No. of Frames:	31	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

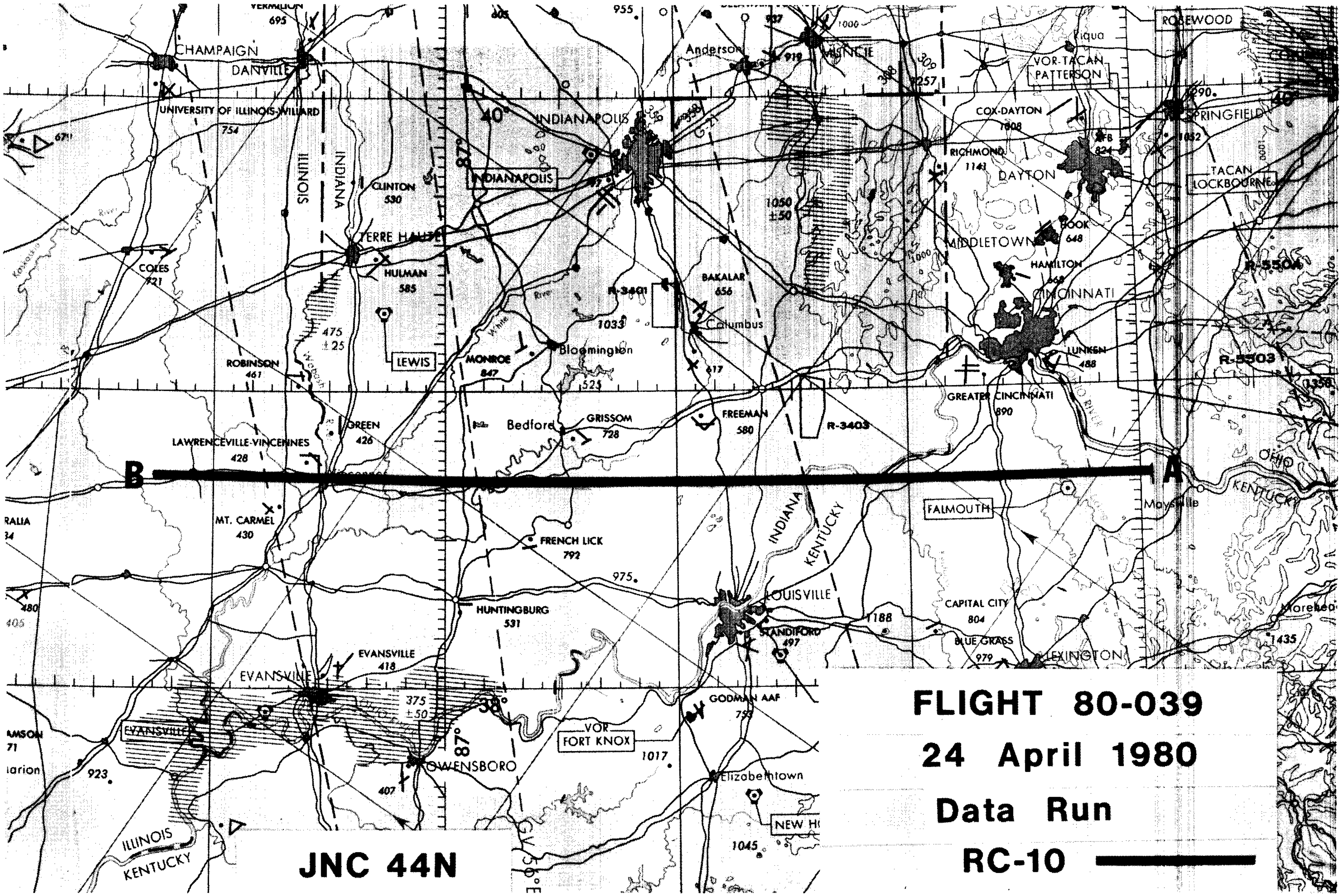
FLIGHT SUMMARY

80-039

This flight was flown in support of Flight Request #0779 (Anderson, USGS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The flight provides photographic data over northern Kentucky and southern Indiana acquired on a ferry flight from Wallops Island, Virginia to Moffett Field, California (see Track Map). Aerosol Particulate Sampler (APS) data was acquired from level off to begin descent and is not depicted on the track map.

The entire area was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


FLIGHT 80-039
24 April 1980
Data Run
RC-10
JNC 44N
A
B
CHAMPAIGN
DANVILLE
UNIVERSITY OF ILLINOIS-WILLARD
INDIANAPOLIS
TERRE HAUTE
HULMAN
LEWIS
ROBINSON
LAWRENCEVILLE-VINCENNES
MT. CARMEL
CLINTON
MONROE
Bloomington
Bedford
GRISSOM
FRENCH LICK
HUNTINGBURG
EVANSVILLE
OWENSBORO
FORT KNOX
GODMAN AAF
Elizabethtown
LOUISVILLE
STANDIFORD
FREEMAN
R-3403
R-3401
BAKALAR
Columbus
Anderson
MUNCIE
RICHMOND
COX-DAYTON
VOR-TACAN PATTERSON
DAYTON
MIDDLETOWN
HAMILTON
CINCINNATI
LUNKEN
GREATER CINCINNATI
FALMOUTH
CAPITAL CITY
BLUE GRASS
LEXINGTON
Maysville
ROSEWOOD
SPRINGFIELD
TACAN LOCKBOURNE
R-5503
OHIO RIVER
ILLINOIS
INDIANA
KENTUCKY

FLIGHT SUMMARY REPORT

Flight No: 80-041A

Date: 29 April 1980

FSR No: 1390

Julian Date: 120

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0810 Support
Requestor: Carlson
#0047 Support
Requestor: Ferry

Area(s) Covered: Western Nebraska

SENSOR DATA

Accession No:	02870	---
Sensor ID No:	023	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.21mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/75	---
No. of Frames:	76	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

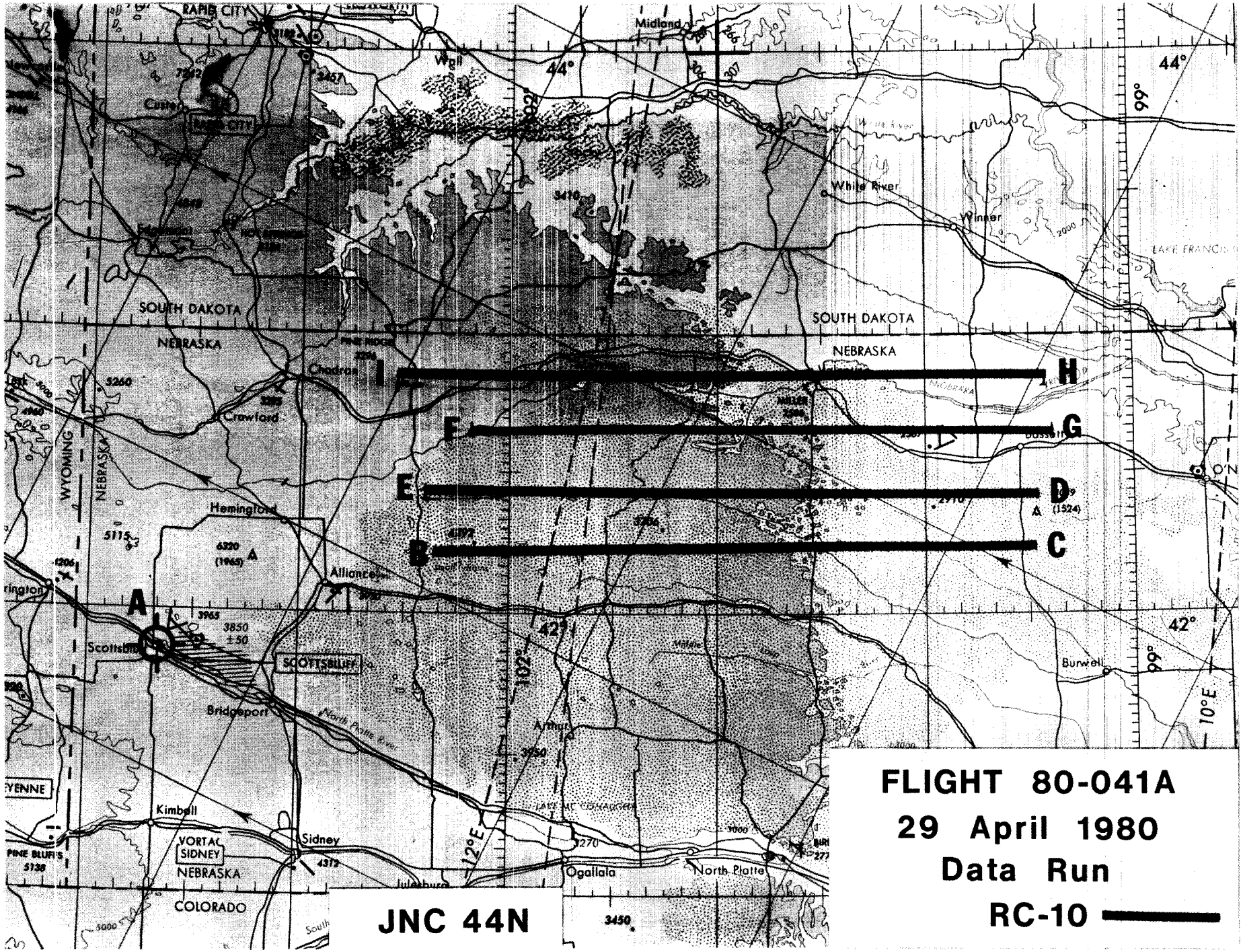
FLIGHT SUMMARY

80-041A

This flight was flown in support of Flight Requests #0810 (Carlson, University of Nebraska) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photographic coverage was obtained over north-western Nebraska enroute from Moffett Field, California to Elsworth AFB, South Dakota (see Track Map). Additionally, Aerosol Particulate Sampler (APS) data was collected for the full time above 60,000 feet and is not depicted on the track map.

The entire area was cloud-free. No processing or camera malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


RAPID CITY
Midland
Wall
44°
Custer
White River
Winner
SOUTH DAKOTA
NEBRASKA
Chadron
Crawford
WYOMING
Hemingford
Alliance
A
B
C
D
E
F
G
H
Scottsbluff
SCOTTSBLIFF
Bridgeport
North Platte River
Arthur
Burwell
42°
102°
Kimball
Sidney
VORTAC
SIDNEY
NEBRASKA
COLORADO
Ogallala
North Platte
12°E
10°E
JNC 44N
FLIGHT 80-041A
29 April 1980
Data Run
RC-10

FLIGHT SUMMARY REPORT

Flight No: 80-041B

Date: 29 April 1980

FSR No: 1391

Julian Date: 120

Sensor Package: RC-10

Aircraft No: 5

Purpose of Flight: #0808 Support
Requestor: Myers

Area(s) Covered: South Dakota

SENSOR DATA

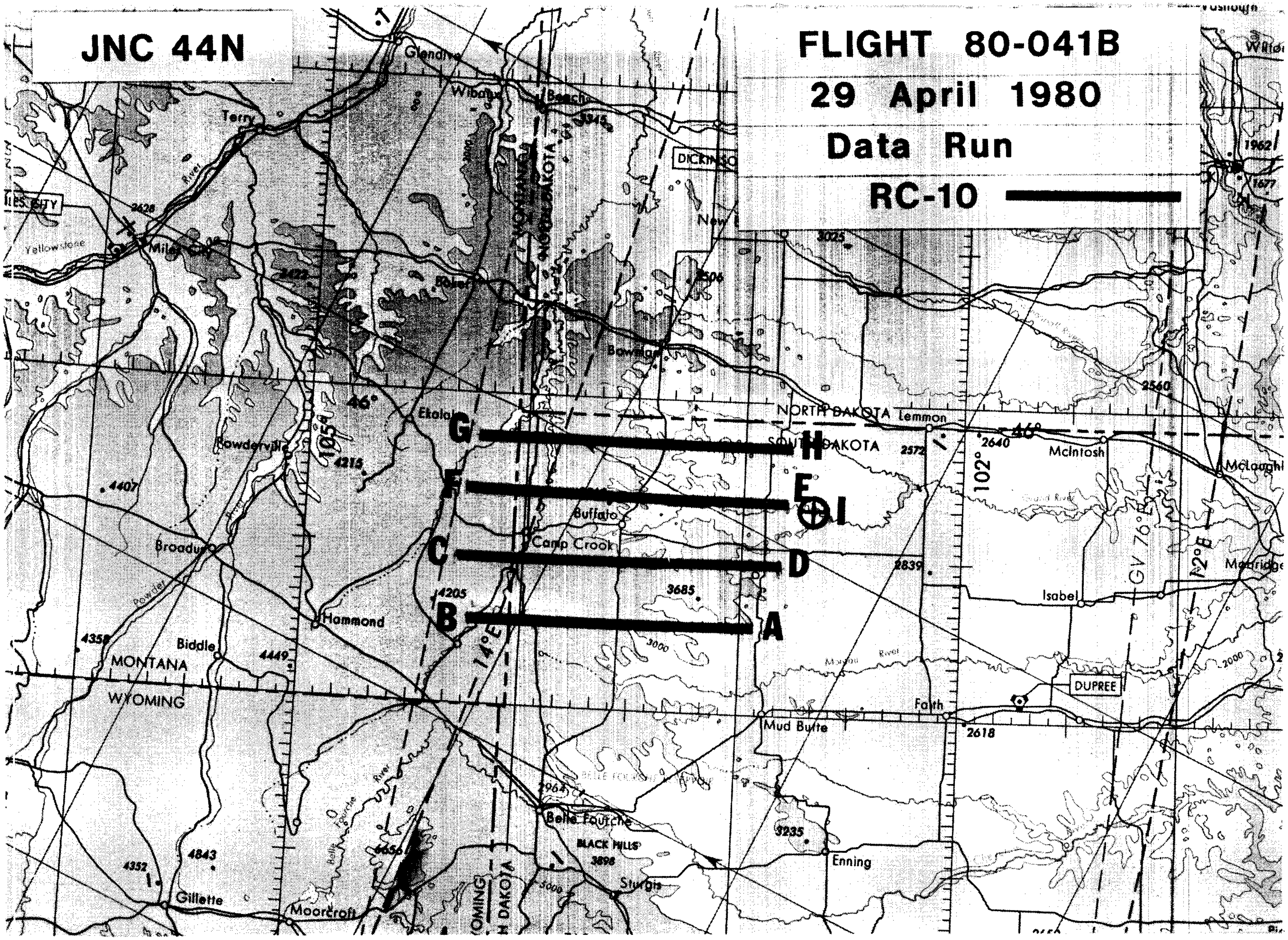
Accession No:	02871
Sensor ID No:	023
Sensor Type:	RC-10
Focal Length:	6" 153.21mm
Film Type:	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .10B + 2.2AV
Spectral Band:	510-900nm
f Stop:	4
Shutter Speed:	1/75
No. of Frames:	37
% Overlap:	60
Quality:	Excellent
Remarks:	---

FLIGHT SUMMARY

80-041B

This flight was flown in support of Flight Request #0808 (Myers, South Dakota State University) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photographic data was collected over the northwest corner of South Dakota (see Track Map).

The area was essentially clear, with only minor strato-cumulus encountered on the first flight line. No camera or processing malfunctions were noted and the qulaity of the data is rated excellent.



JNC 44N
FLIGHT 80-041B
29 April 1980
Data Run
RC-10
A
B
C
D
E
F
G
H
I
Glendive
Wibaux
Beach
Terry
Miles City
Yellowstone
DICKINSON
Bowman
Ekalaka
Powderville
Broadus
Hammond
Biddle
MONTANA
WYOMING
NORTH DAKOTA
SOUTH DAKOTA
Lemmon
McIntosh
McLaughlin
Mobridge
Isabel
DUPREE
Faith
Mud Butte
Buffalo
Camp Crook
Belle Fourche
BLACK HILLS
Sturgis
Enning
Gillette
Moorcroft
46°
105°
102°
14°E
12°E
GV 76°E
3685
4205
4215
4407
4358
4449
4843
4352
2839
2572
2640
2618
3235
3898
2560
3025
2506
1962
1677
2628

FLIGHT SUMMARY REPORT

Flight No: 80-042

Date: 30 April 1980

FSR No: 1392

Julian Date: 021

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0751 Support
Requestor: Brooks
#0047 Support
Requestor: Ferry

Area(s) Covered: Northwestern Minnesota

SENSOR DATA

Accession No:	02872	---
Sensor ID No:	026	024
Sensor Type:	RC-10	APS
Focal Length:	12" 304.97mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/125	---
No. of Frames:	92	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

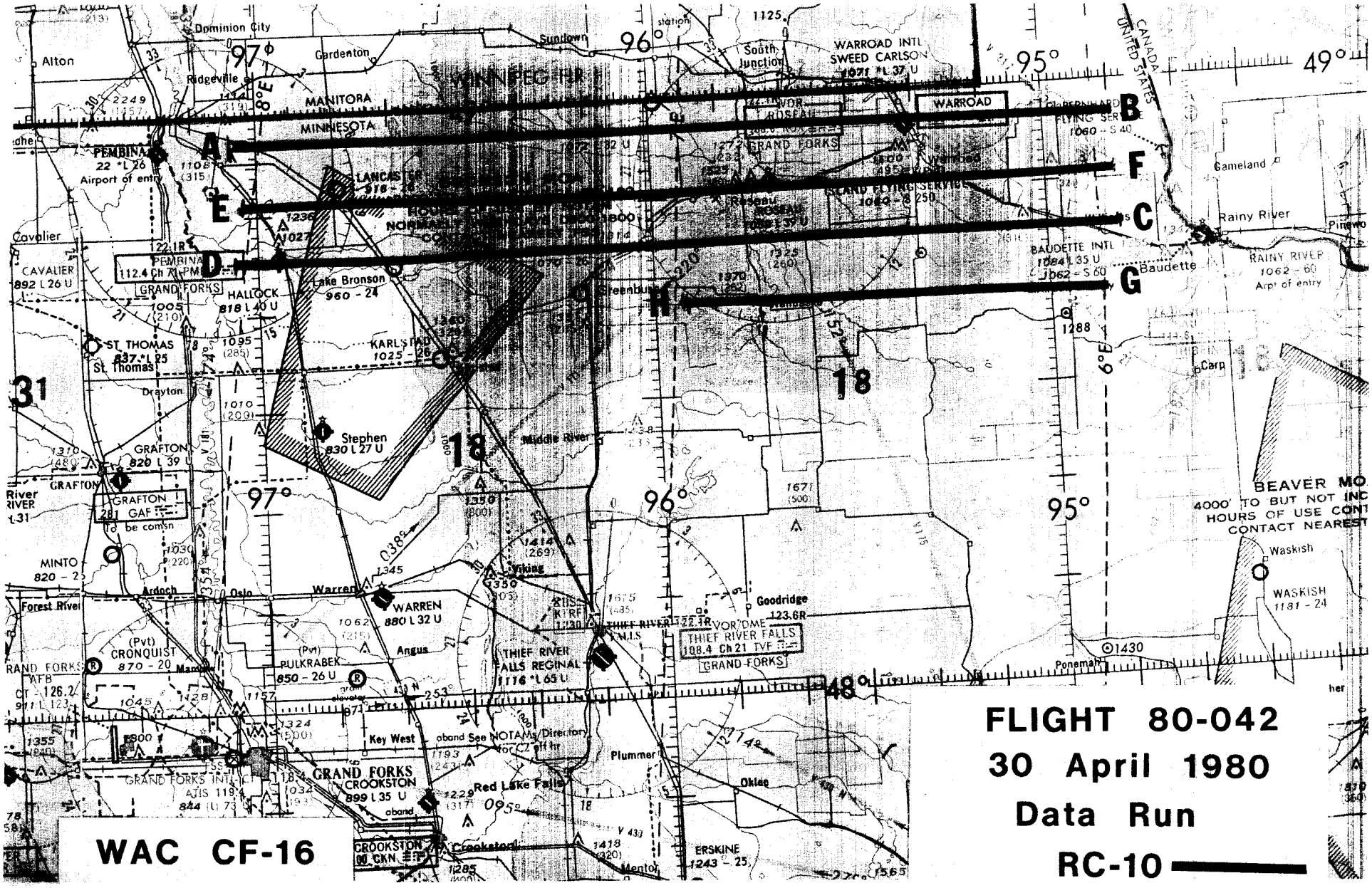
FLIGHT SUMMARY

80-042

This flight was flown in support of Flight Requests #0751 (Brooks, USFWS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photographic coverage was obtained over northwestern Minnesota (see Track Map). Aerosol Particulate Sampler (APS) data was collected throughout the flight but is not indicated on the track map.

Minor to heavy cirrus was encountered; increasing as the flight progressed. Consequently the flight was terminated after only 3 1/2 flight lines. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


WINNIPEG FIR
MANITOBA
MINNESOTA
A
B
C
D
E
F
G
PEMBINA
22 *L 26
Airport of entry
CAVALIER
892 L 26 U
GRAND FORKS
HALLOCK
818 L 40 U
ST. THOMAS
837 *L 25
St. Thomas
GRAFTON
820 L 39 U
GRAFTON
281 GAF
MINTO
820 - 25
Ardoch
Oslo
Warren
WARREN
880 L 32 U
Stephen
830 L 27 U
Lake Bronson
960 - 24
KARLSTAD
1025 - 25
Greenbush
Middle River
Viking
Goodridge
123.6R
THIEF RIVER FALLS
108.4 Ch 21 TVF
GRAND FORKS
THIEF RIVER FALLS REGINAL
1176 *L 65 U
(Pvt)
CRONQUIST
870 - 20
(Pvt)
PULKRABEK
850 - 26 U
Angus
Key West
GRAND FORKS
CROOKSTON
899 L 35 U
Red Lake Falls
Crookston
ERSKINE
1243 - 25
Mentor
Plummer
Oklee
Ponemah
WARROAD INTL
SWEED CARLSON
1071 *L 37 U
WARROAD
GRAND FORKS
BAUDETTE INTL
1064 L 35 U
1062 - S 60
Baudette
RAINY RIVER
1062 - 60
Airpt of entry
Rainy River
Gameland
Pinewo
Carp
WASKISH
1181 - 24
Waskish
BEAVER MO
4000' TO BUT NOT INC
HOURS OF USE CONT
CONTACT NEAREST
CANADA
UNITED STATES
97°
96°
95°
49°
48°
31
18
FLIGHT 80-042
30 April 1980
Data Run
RC-10
WAC CF-16

FLIGHT SUMMARY REPORT

Flight No: 80-044

Date: 1 May 1980

FSR No: 1393

Julian Date: 122

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0751 Support
Requestor: Brooks
#0047 Support
Requestor: Ferry

Area(s) Covered: Southern Minnesota

SENSOR DATA

Accession No:	02873	---
Sensor ID No:	026	024
Sensor Type:	RC-10	APS
Focal Length:	12" 304.97mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/125	---
No. of Frames:	432	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

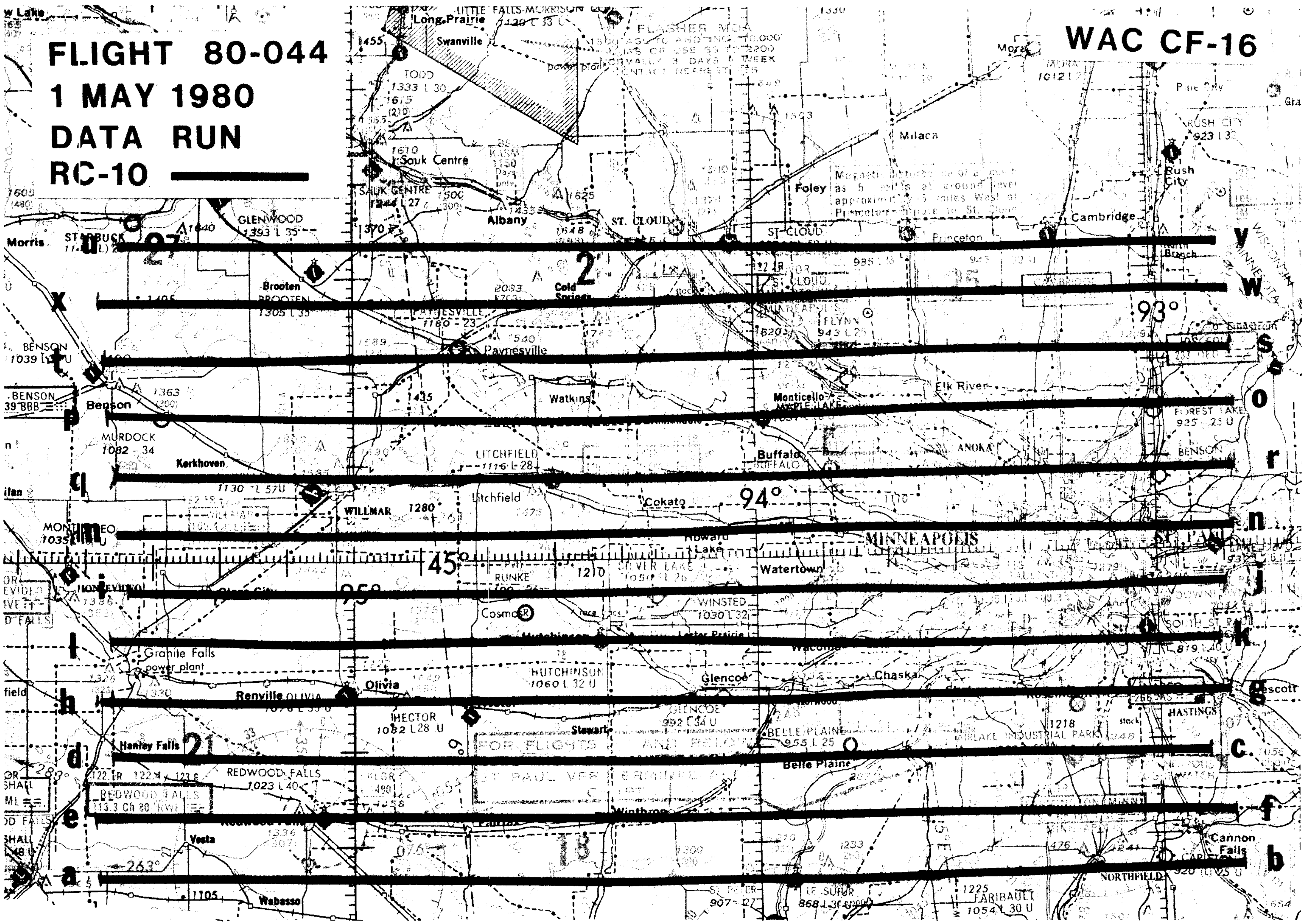
FLIGHT SUMMARY

80-044

This flight was flown in support of Flight Requests #0751 (Brooks, USFWS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photographic coverage was obtained over southern Minnesota with a 12" focal length RC-10 camera. Additionally, Aerosol Particulate Sampler (APS) data was acquired throughout the flight, but is not depicted on the track map.

The area was cloud-free, with the exception of minor cirrus and cumulus in the southwest portion. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


FLIGHT 80-044
1 MAY 1980
DATA RUN
RC-10
WAC CF-16
Long Prairie
Swanville
Sauk Centre
Albany
ST. CLOUD
Foley
Milaca
Princeton
Cambridge
Rush City
Morris
GLENWOOD
Brooten
Cold Spring
Paynesville
Benson
Watkins
Elk River
Monticello
MURDOCK
Kerkhoven
LITCHFIELD
Litchfield
Buffalo
ANOKA
FOREST LAKE
WILLMAR
Cokato
MINNEAPOLIS
Howard Lake
Watertown
RUNKE
SILVER LAKE
WINSTED
Cosmos
Granite Falls
HUTCHINSON
Glencoe
Chaska
Renville
Olivia
HECTOR
Stewart
BELLE PLAINE
Belle Plaine
HASTINGS
Hanley Falls
REDWOOD FALLS
Winthrop
Vesta
Wabasso
NORTHFIELD
FARIBAULT
Cannon Falls
93°
94°
95°
45°
a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
p
q
r
s
t
u
v
w
x

FLIGHT SUMMARY REPORT

Flight No: 80-045A

Date: 1 May 1980

FSR No: 1394

Julian Date: 122

Sensor Package: RC-10

Aircraft No: 4

Purpose of Flight: #0698 Support
Requestor: Pitts

Area(s) Covered: Northern Oregon

SENSOR DATA

Accession No:	02874
Sensor ID No:	035
Sensor Type:	RC-10
Focal Length:	6" 153.46mm
Film Type:	High Definition Aerochrome Infrared, SO-127
Filtration:	CC .10B + 2.2AV
Spectral Band:	510-900nm
f Stop:	4
Shutter Speed:	1/100
No. of Frames:	27
% Overlap:	60
Quality:	Excellent
Remarks:	---

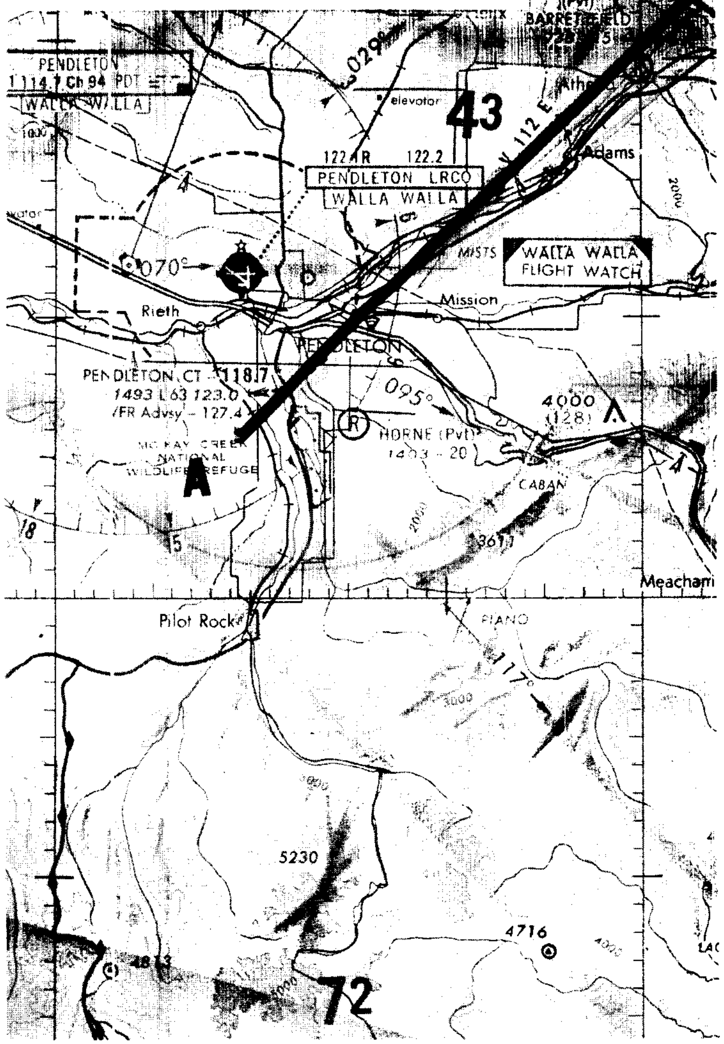
FLIGHT SUMMARY

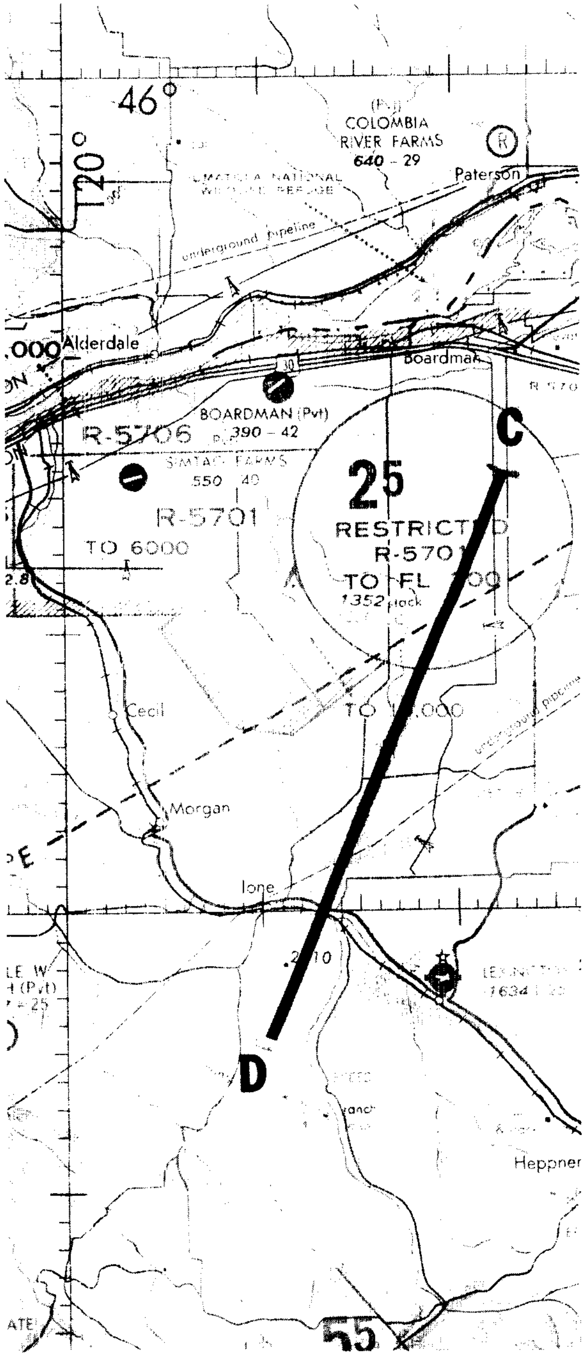
80-045A

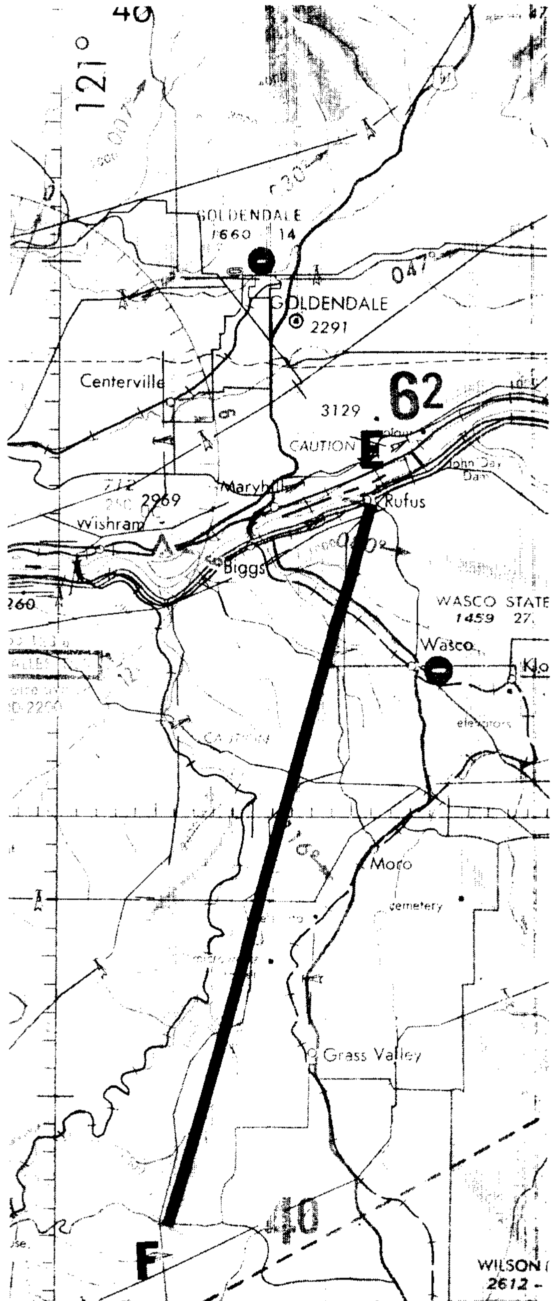
This flight was flown in support of Flight Request #0698 (Pitts, NASA/ JSC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. RC-10 photographic coverage was obtained over 3 sites in north central Oregon (see Track Map).

All areas were cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

FLIGHT 80-045A
1 MAY 1980
DATA RUN
RC-10 ———







Seattle Sectional

FLIGHT SUMMARY REPORT

Flight No: 80-045B

Date: 1 May 1980

FSR No: 1395

Julian Date: 122

Sensor Package: RC-10

Aircraft No: 4

Purpose of Flight: #0862 Support
Requestor: Weber

Area(s) Covered: Mt. St Helens, Gifford Pinchot NF, Washington
Willamette NF, Oregon

SENSOR DATA

Accession No:	02875
Sensor ID No:	035
Sensor Type:	RC-10
Focal Length:	6" 153.46mm
Film Type:	High Definition Aerochrome Infrared, SO-127
Filtration:	CC .10B + 2.2AV
Spectral Band:	510-900nm
f Stop:	4
Shutter Speed:	1/100
No. of Frames:	55
% Overlap:	60
Quality:	Excellent
Remarks:	---

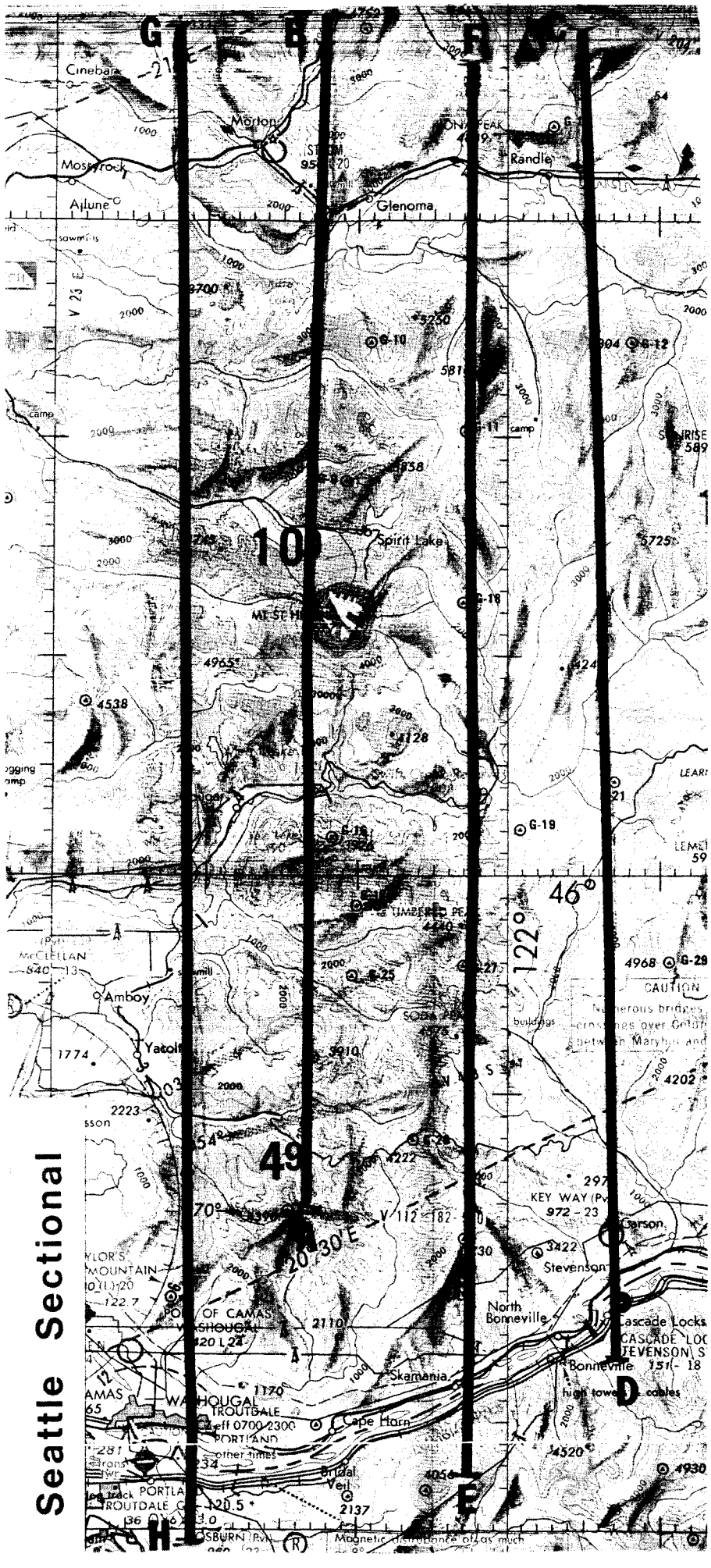
FLIGHT SUMMARY

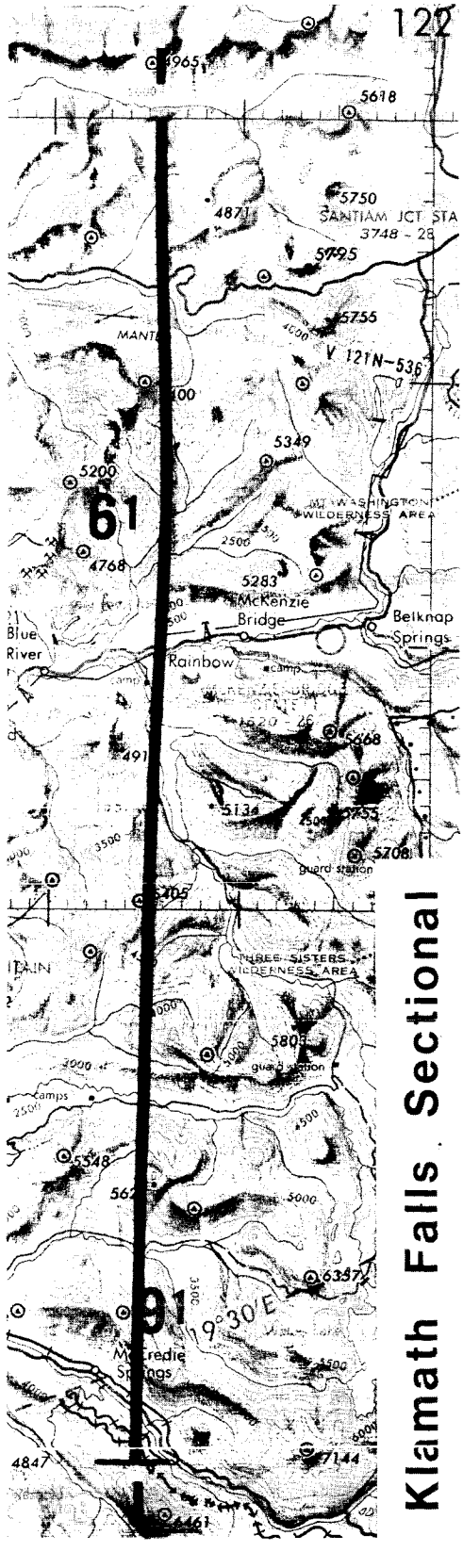
80-045B

This flight was flown in support of Flight Request #0862 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photographic coverage of the Gifford Pinchot National Forest, Washington and a portion of the Willamette National Forest, Oregon were acquired with an RC-10 camera (see Track Map).

Minor cumulus cloud cover was encountered on all flight lines over the Pinchot area, while the Willamette NF line was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent. The HR 732 camera was also flown, however, due to an inter-velometer malfucntion no data was acquired.

FLIGHT 80-045B
1 May 1980
Data Run
RC-10





FLIGHT SUMMARY REPORT

Flight No: 80-046

Date: 2 May 1980

FSR No: 1396

Julian Date: 123

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0751 Support
Requestor: Brooks
#0047 Support
Requestor: Ferry

Area(s) Covered: Minnesota

SENSOR DATA

Accession No:	02876	---
Sensor ID No:	026	024
Sensor Type:	RC-10	APS
Focal Length:	12" 304.97mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/125	---
No. of Frames:	320	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

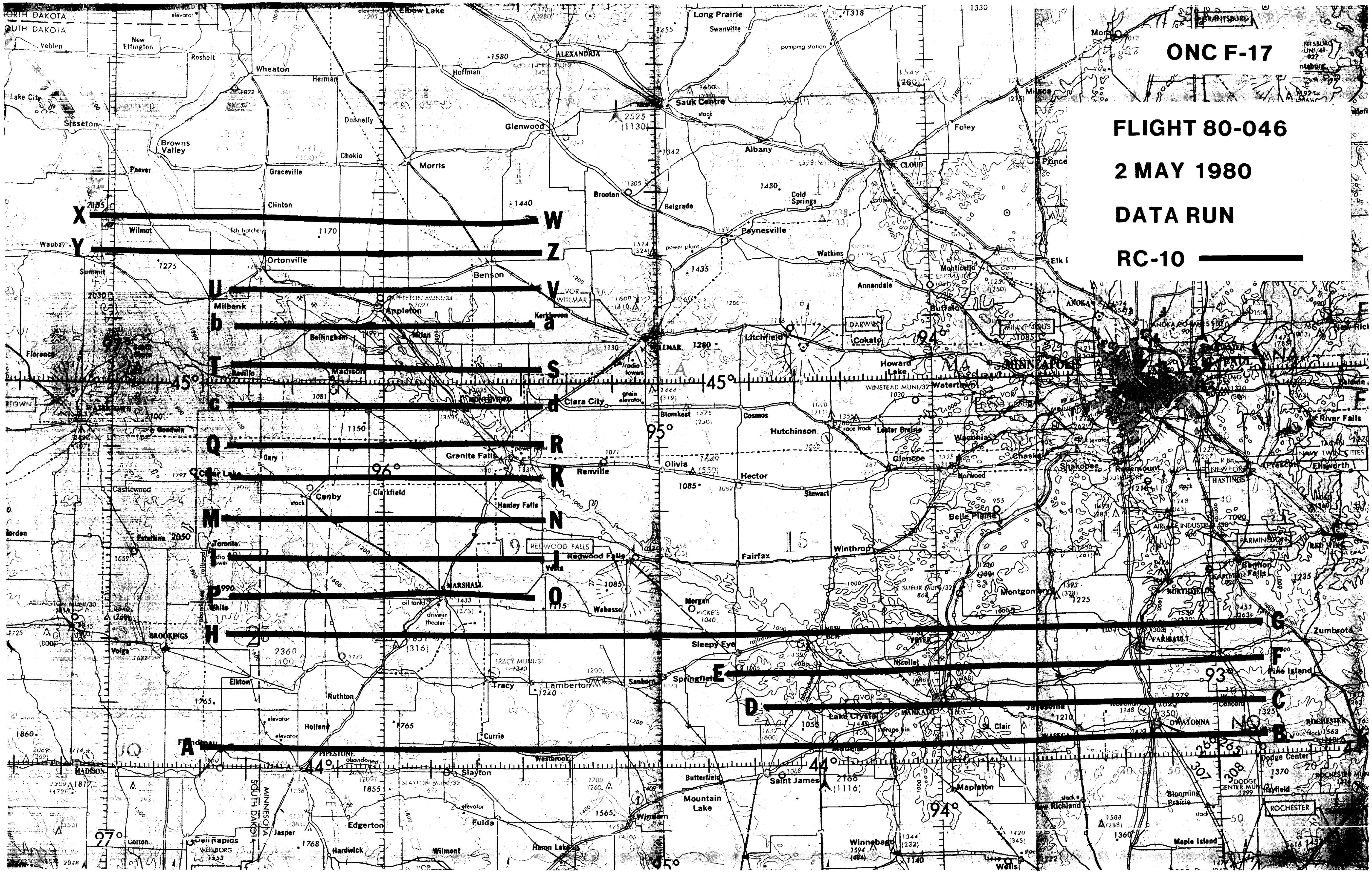
FLIGHT SUMMARY

80-046

This flight was flown in support of Flight Requests #0751 (Brooks, USFWS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over Minnesota and portions of South Dakota (see Track Map). Additionally, Aerosol Particulate Sampler (APS) data was collected throughout the flight, although not indicated on the track map.

Minor to light scattered cumulus clouds were encountered throughout the flight. The photography acquired is of excellent quality with no camera or processing malfunctions noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



ONC F-17
FLIGHT 80-046
2 MAY 1980
DATA RUN
RC-10
NORTH DAKOTA
SOUTH DAKOTA
Elbow Lake
ALEXANDRIA
Long Prairie
Sauk Centre
Wheaton
Morris
Glenwood
Benson
Ortonville
Milbank
Appleton
Madison
Montevideo
Clara City
Granite Falls
Renville
Olivia
Hector
Hutchinson
Litchfield
Willmar
MINNEAPOLIS
Canby
Marshall
Redwood Falls
Sleepy Eye
Springfield
Tracy
Lamberton
Pipestone
Slayton
Windom
Mankato
Faribault
Owatonna
Rochester
Watertown
Brookings
Flandreau
45°
44°
95°
94°
96°
97°
93°

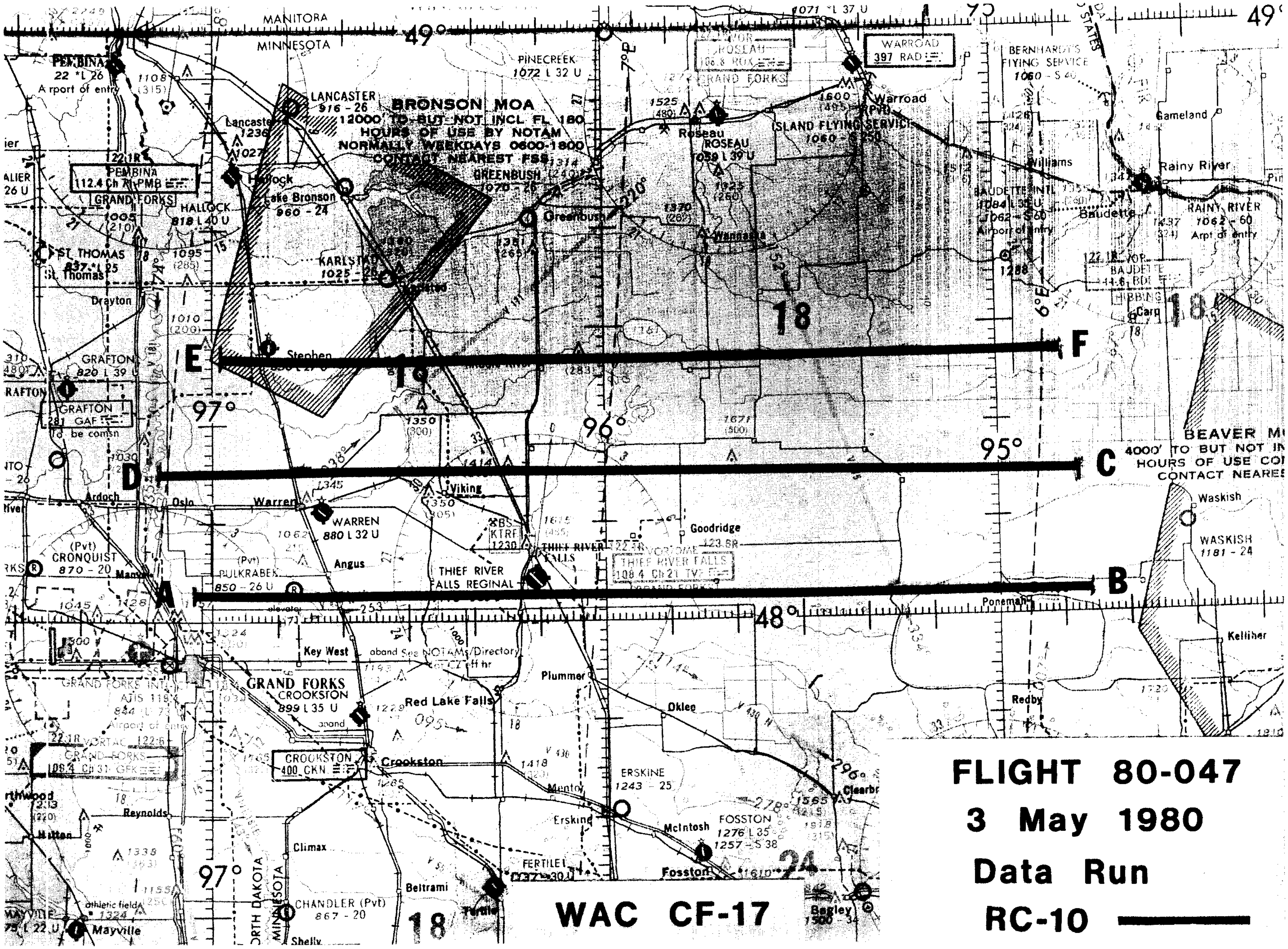
FLIGHT SUMMARY

80-047

This flight was flown in support of Flight Requests #0751 (Brooks, USFWS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photographic coverage was obtained over an area in northern Minnesota (see Track Map). Aerosol Particulate Sampler (APS) data was acquired for the full time at altitude, but is not depicted on the track map.

Minor to moderate cumulus and cirrus were encountered on all flight lines. Because of the cloud build-up the flight was terminated early. No processing or camera malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


FLIGHT 80-047
3 May 1980
Data Run
RC-10
WAC CF-17
A
B
C
D
E
F
MANITOBA
MINNESOTA
NORTH DAKOTA
49°
48°
97°
96°
95°
BRONSON MOA
12000 TO BUT NOT INCL FL 180
HOURS OF USE BY NOTAM
NORMALLY WEEKDAYS 0600-1800
CONTACT NEAREST FSS
PEMBINA
Airport of entry
ST. THOMAS
Drayton
GRAFTON
HALLOCK
LANCASTER
Lake Bronson
KARLSTAD
Stephen
PINECREEK
GREENBUSH
Greenbush
Roseau
ROSEAU
Wannaska
Warroad
ISLAND FLYING SERVICE
BERNHARDTS FLYING SERVICE
Williams
BAUDETTE INTL
Baudette
Gameland
Rainy River
RAINY RIVER
BEAVER
Waskish
WASKISH
Kelliher
Redby
Ponemah
Goodridge
THIEF RIVER FALLS REGIONAL
Viking
WARREN
Warren
Angus
Oslo
Ardoch
CRONQUIST
PULKRABEK
GRAND FORKS
CROOKSTON
Crookston
Key West
Red Lake Falls
Plummer
Oklee
ERSKINE
Erskine
Mentor
McIntosh
FOSSTON
Fosston
Beltrami
Climax
CHANDLER (Pvt)
Shelly
Reynolds
Hatton
Mayville
Begley

FLIGHT SUMMARY REPORT

Flight No: 80-048

Date: 4 May 1980

FSR No: 1398

Julian Date: 125

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0779 Support
Requestor: Anderson
#0047 Support
Requestor: Ferry

Area(s) Covered: Indiana

SENSOR DATA

Accession No:	02878	---
Sensor ID No:	036	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.19mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/75	---
No. of Frames:	12	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

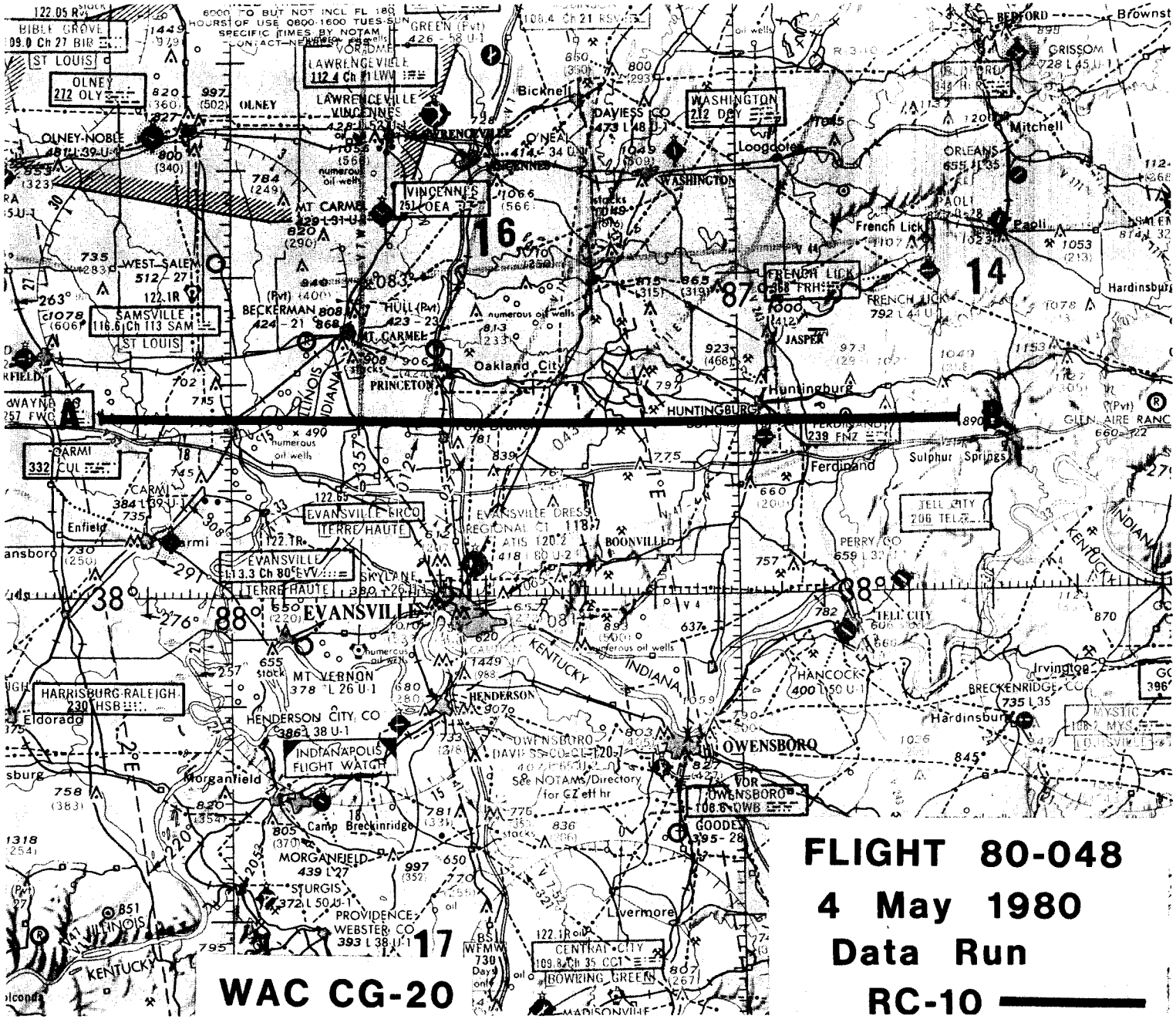
FLIGHT SUMMARY

80-048

This flight was flown in support of Flight Requests #0779 (Anderson, USGS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Reserach Program (AIRP) plan. Photographic coverage was obtained over a small portion of Indiana, (see Track Map) however the flight was terminated due to extensive, rapid buildup of cloudcover. Aerosol Particulate Sampler (APS) data was collected for the full time at altitude, but is not depicted on the track map.

Minor to heavy cumulus cloud was encountered and the flight not continued. No processing or camera malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


WAC CG-20
FLIGHT 80-048
4 May 1980
Data Run
RC-10

FLIGHT SUMMARY REPORT

Flight No: 80-049

Date: 6 May 1980

FSR No: 1399

Julian Date: 127

Sensor Package: Dual RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0751 Support
Requestor: Brooks
#0047 Support
Requestor: Ferry

Area(s) Covered: Southern Minnesota and South Dakota

SENSOR DATA

Accession No:	02879	02880	---
Sensor ID No:	034	036	024
Sensor Type:	RC-10	RC-10	APS
Focal Length:	12" 304.66mm	6" 153.19mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B	CC .10B + 2.2AV	---
Spectral Band:	510-900nm	510-900nm	---
f Stop:	4	4	---
Shutter Speed:	1/125	1/75	---
No. of Frames:	345	18	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

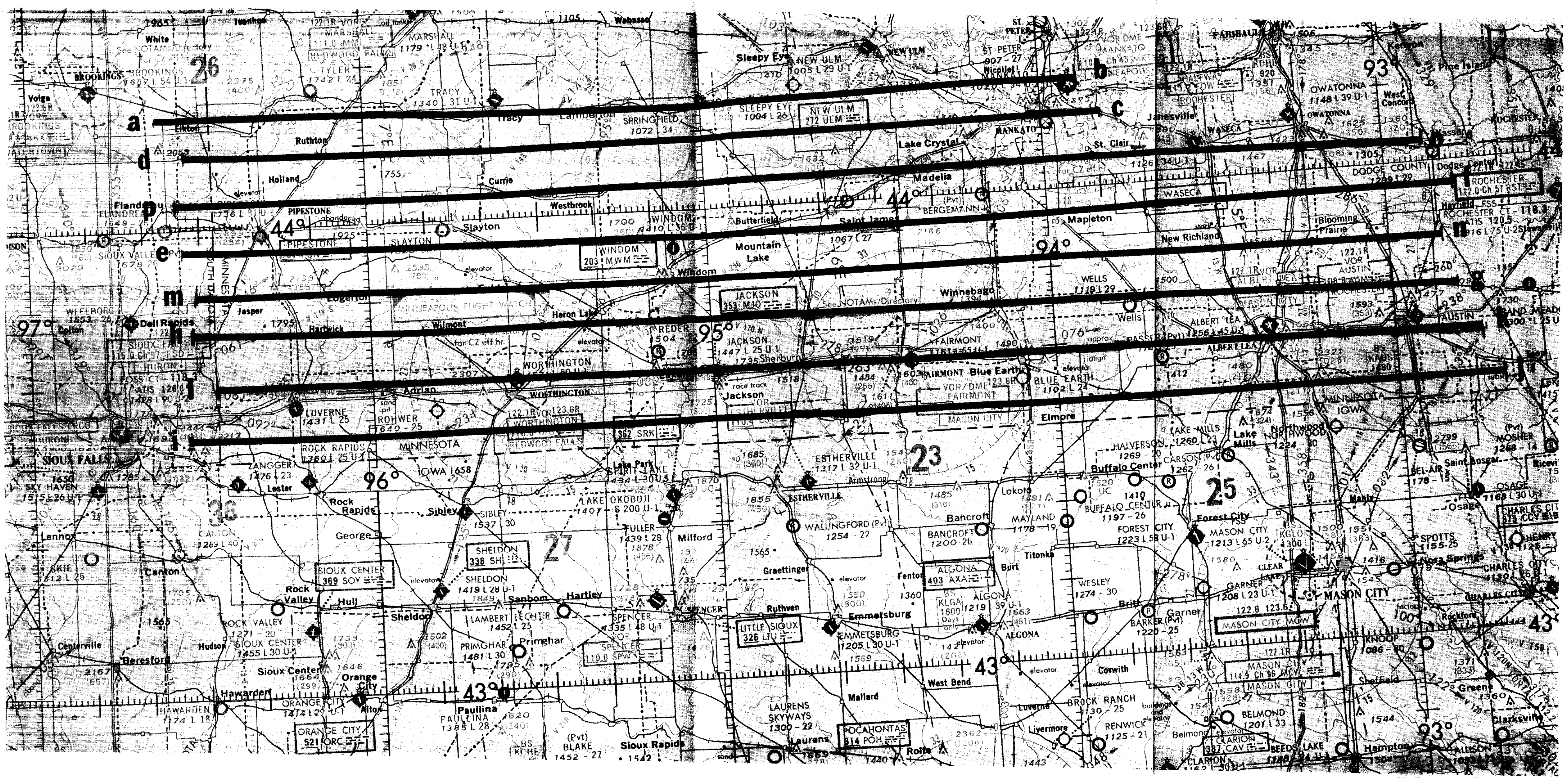
FLIGHT SUMMARY

80-049

This flight was flown in support of Flight Requests #0751 (Brooks, USFWS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photographic coverage of southern Minnesota was obtained with a 12" focal length RC-10 camera. Additional coverage was obtained over Rapid City, South Dakota with 6 and 12 inch cameras. Aerosol Particulate Sampler (APS) data was collected for the full time at altitude. Because of the extensive area of coverage, no track map is provided.

The area was substantially clear with moderate to heavy cirro-cumulus clouds encountered over the western margin of coverage. The lens calibration illumination failed on the flight, but doesn't degrade the imagery. No other camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



WAC CF-17

FLIGHT 80-049

6 May 1980

Data Run

RC-10 ———

FLIGHT SUMMARY REPORT

Flight No: 80-050

Date: 8 May 1980

FSR No: 1400

Julian Date: 129

Sensor Package: Dual RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0666 Support
Requestor: Lumb
#0047 Support
Requestor: Ferry

Area(s) Covered: Wyoming and South Dakota

SENSOR DATA

Accession No:	02881	02882	---
Sensor ID No:	036	034	024
Sensor Type:	RC-10	RC-10	APS
Focal Length:	6" 153.19mm	12" 304.66mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B + 2.2AV	CC .10B	---
Spectral Band:	510-900nm	510-900nm	---
f Stop:	4	4	---
Shutter Speed:	1/100	1/125	---
No. of Frames:	99	14	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

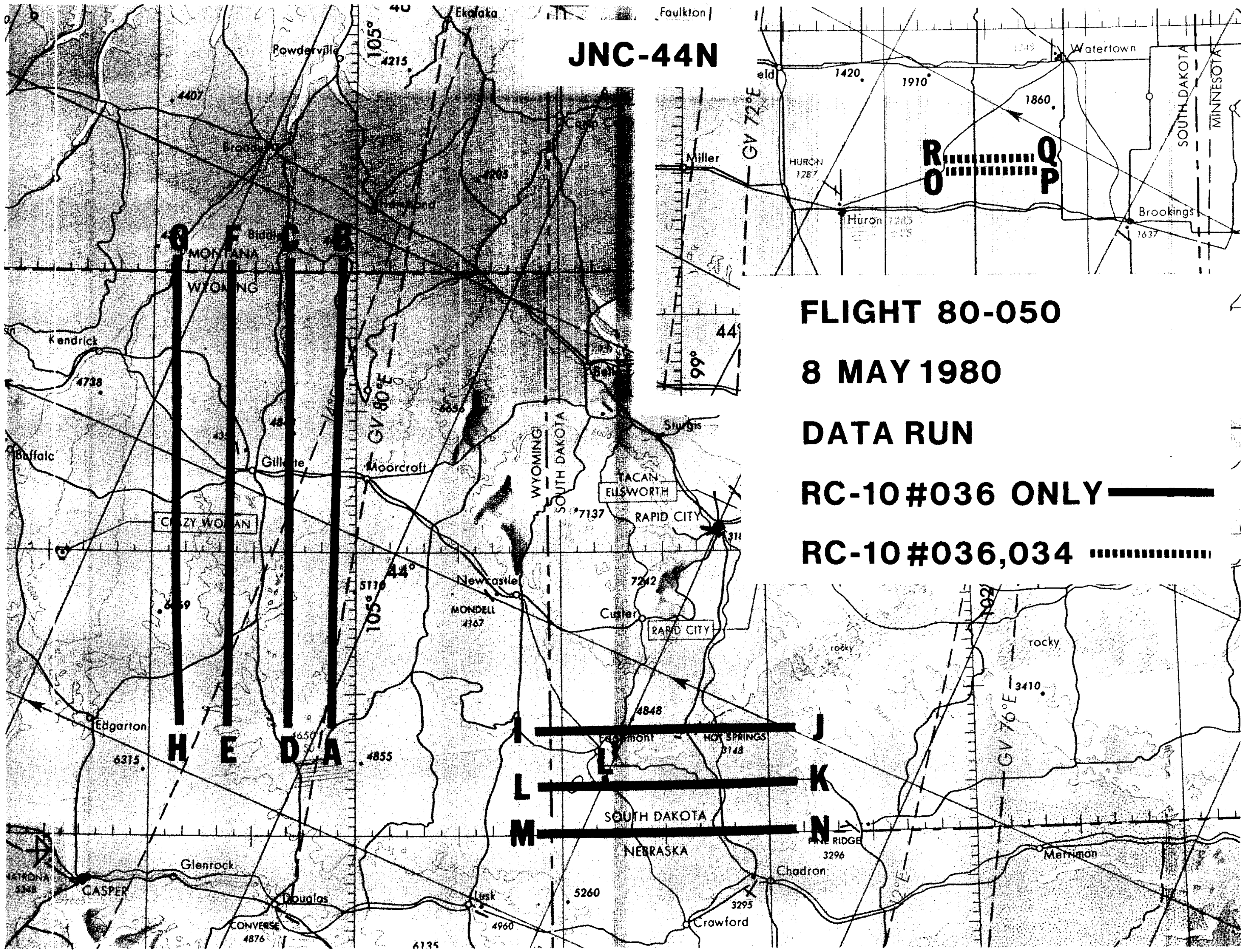
FLIGHT SUMMARY

80-050

This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ARC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over selected areas of Wyoming and South Dakota (see Track Map). Additionally, Aerosol Particulate Sampler (APS) data was collected throughout the flight although not indicated on the track map.

Minor cirrus and cumulus clouds were encountered over the first two areas while the third area was clear. The photography acquired is excellent quality with no camera or processing malfunctions noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


JNC-44N
FLIGHT 80-050
8 MAY 1980
DATA RUN
RC-10 #036 ONLY
RC-10 #036,034
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q
R
MONTANA
WYOMING
SOUTH DAKOTA
NEBRASKA
MINNESOTA
Watertown
Brookings
Huron
Miller
Faulkton
Ekalaka
Powderville
Kendrick
Buffalo
Gillette
Moorcroft
Newcastle
Sturgis
RAPID CITY
TACAN
ELLSWORTH
Custer
HOT SPRINGS
Edgarton
Glenrock
CASPER
Douglas
CONVERSE
Lusk
Crawford
Chadron
PINE RIDGE
Merriman
CRAZY WOMAN
MONDELL
GV 72°E
GV 76°E
GV 80°E
105°
99°
102°
44°

FLIGHT SUMMARY REPORT

Flight No: 80-052

Date: 15 May 1980

FSR No: 1402

Julian Date: 136

Sensor Package: Vinten System A
Lightning Detection Experiment (LDE)
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0791 Support
Requestor: Vaughan
#0047 Support
Requestor: Ferry

Area(s) Covered: Texas

SENSOR DATA

Accession No:	---	---	---	---	---
Sensor ID No:	001	002	004	064	024
Sensor Type:	Vinten	Vinten	Vinten	LDE	APS
Focal Length:	1-3/4" 44.5mm	1-3/4" 44.5mm	1-3/4" 44.5mm	---	---
Film Type:	Plus-X, 2402	Infrared Aerographic, 2424	Panatomic-X, 3400	---	---
Filtration:	Wratten 12	Wratten 25	Transmission grating	---	---
Spectral Band:	510-700nm	590-900nm	400-700nm	---	---
f Stop:	16	22	16	---	---
Shutter Speed:	1/250	1/250	1/250	---	---
No. of Frames:	---	---	---	---	---
% Overlap:	60	60	60	---	---
Quality:	Good	Good	Good	---	---
Remarks:	---	---	---	Mag tape data	Non-imaging sensor

FLIGHT SUMMARY

80-052

This flight was flown in support of Flight Requests #0791 (Vaughan, NASA/MSFC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The Lightning Detector Experiment (LDE) was flown during daylight thunderstorm activity over Texas. The track map provided was constructed from heading data recorded during flight. Due to the special application of the photography acquired, it was provided directly to the investigators and not accessioned. Aerosol Particulate Sampler (APS) data was collected throughout the flight to Texas and return to Ellsworth AFB, South Dakota.

The purpose of the Lightning Detector Experiment is the development of an orbital lightning detector for use on the space shuttle. The experiment consists of four parts; an optical lightning detector which detects visible radiation generated by lightning discharges during either day or night conditions, an electric field antenna which detects variations in the electric field below the aircraft associated with cloud charging and lightning discharge, a lightning spectrometer monitoring spectral distribution of lightning discharges during night conditions, and a Vinten Camera system to acquire data for spectral photographic measurements. Data acquired by the first three parts is recorded on an M-14E tape recorder.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.

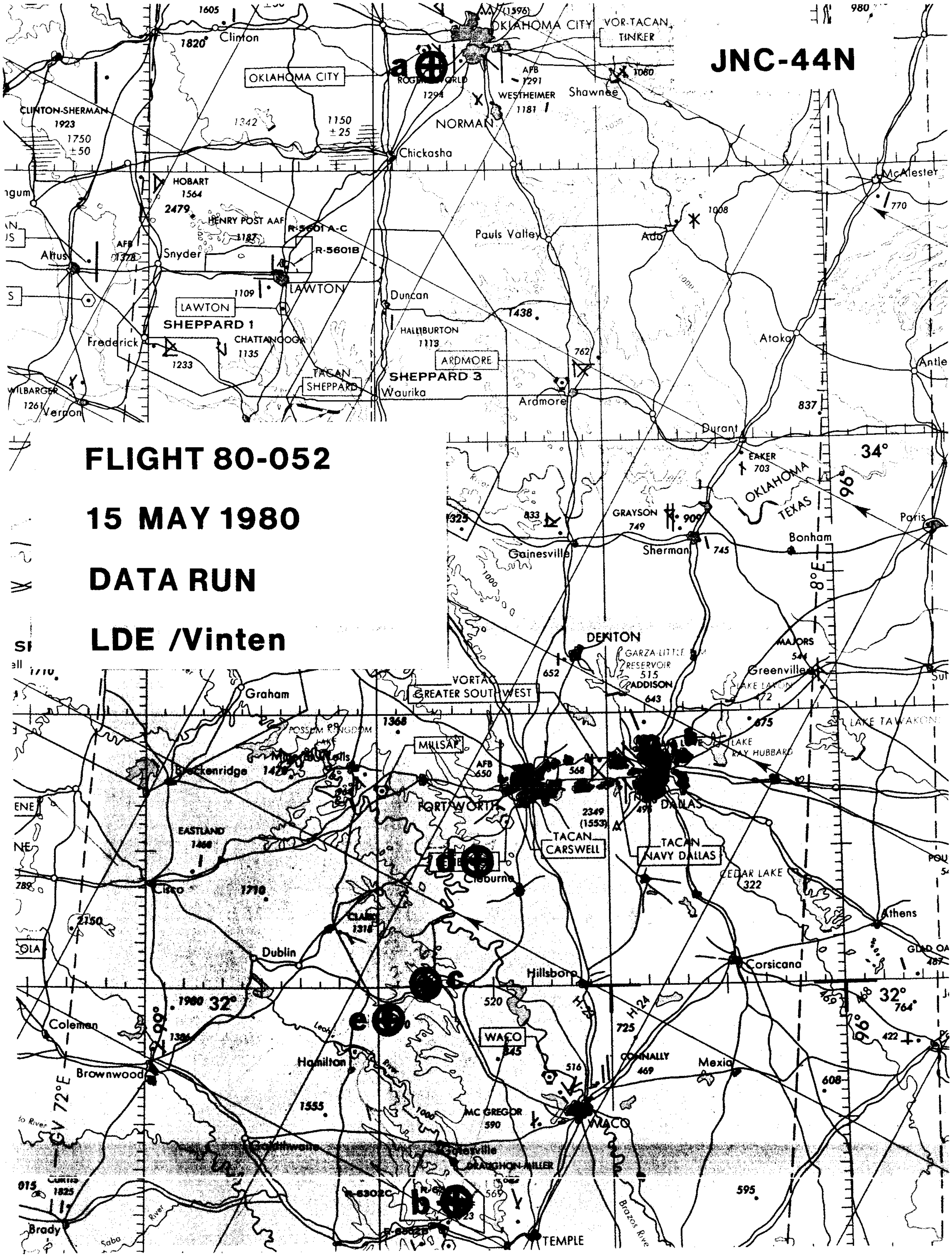
JNC-44N

FLIGHT 80-052

15 MAY 1980

DATA RUN

LDE /Vinten



FLIGHT SUMMARY REPORT

Flight No: 80-053

Date: 16 May 1980

FSR No: 1403

Julian Date: 137

Sensor Package: Vinten System B
Lightning Detection Experiment (LDE)
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0791 Support
Requestor: Vaughan
#0047 Support
Requestor: Ferry

Area(s) Covered: Arkansas

SENSOR DATA

Accession No:	---	---	---	---	---
Sensor ID No:	011	012	013	064	024
Sensor Type:	Vinten	Vinten	Vinten	LDE	APS
Focal Length:	1-3/4" 44.5mm	1-3/4" 44.5mm	1-3/4" 44.5mm	---	---
Film Type:	Plus-X, 2402	Aerographic Infrared, 2424	Panatomic-X, 3400	---	---
Filtration:	Wratten 12	Wratten 25	Transmission grating	---	---
Spectral Band:	510-700nm	590-900nm	400-700nm	---	---
f Stop:	2.8	2.8	2.8	---	---
Shutter Speed:	---	---	---	---	---
No. of Frames:	---	---	---	---	---
% Overlap:	60	60	60	---	---
Quality:	Good	Good	Good	---	---
Remarks:	---	---	---	Mag tape data	Non-imaging sensor

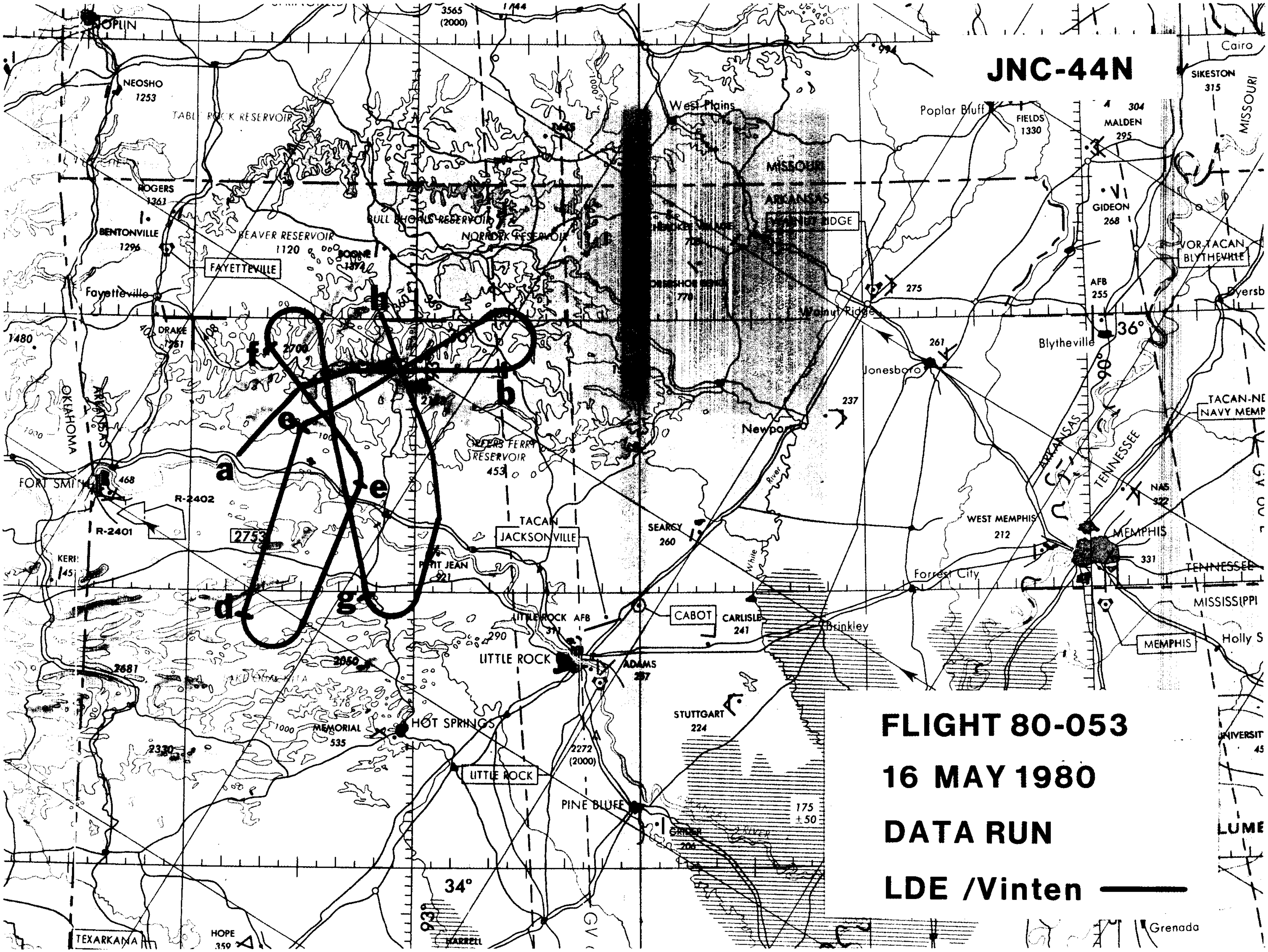
FLIGHT SUMMARY

80-053

This flight was flown in support of Flight Requests #0791 (Vaughan, NASA/MSFC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The Lightning Detector Experiment (LDE) was flown during night thunderstorm activity over Arkansas. The track map provided was constructed from heading data recorded during flight. Due to the special application of the photography acquired, it was provided directly to the investigators and not accessioned. Aerosol Particulate Sampler (APS) data was collected throughout the flight to Arkansas and return to Ellsworth AFB, South Dakota.

The purpose of the Lightning Detector Experiment is the development of an orbital lightning detector for use on the space shuttle. The experiment consists of four parts; an optical lightning detector which detects visible radiation generated by lightning discharges during either day or night conditions, an electric field antenna which detects variations in the electric field below the aircraft associated with cloud charging and lightning discharge, a lightning spectrometer monitoring spectral distribution of lightning discharges during night conditions, and a Vinten Camera system to acquire data for spectral photographic measurements. Data acquired by the first three parts is recorded on an M-14E tape recorder.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


JNC-44N
FLIGHT 80-053
16 MAY 1980
DATA RUN
LDE /Vinten
a
b
d
e
f
g
h
JOPLIN
NEOSHO
1253
TABLE ROCK RESERVOIR
ROGERS
1361
BENTONVILLE
1296
BEAVER RESERVOIR
1120
FAYETTEVILLE
Fayetteville
DRAKE
1480
OKLAHOMA
ARKANSAS
FORT SMITH
468
R-2402
R-2401
2753
BULL SHOALS RESERVOIR
NORFORK RESERVOIR
West Plains
MISSOURI
WALNUT RIDGE
Walnut Ridge
275
Poplar Bluff
FIELDS
1330
MALDEN
295
GIDEON
268
VOR-TACAN
BLYTHEVILLE
AFB
255
Blytheville
36°
261
Jonesboro
237
Newport
GREERS FERRY RESERVOIR
453
TACAN
JACKSONVILLE
SEARCY
260
PETIT JEAN
LITTLE ROCK AFB
CABOT
CARLISLE
241
Brinkley
LITTLE ROCK
ADAMS
290
HOT SPRINGS
MEMORIAL
535
2330
2681
2050
STUTTGART
224
2272
(2000)
PINE BLUFF
175
±50
34°
HOPE
TEXARKANA
HARRELL
Grenada
WEST MEMPHIS
212
Forrest City
MEMPHIS
331
NAS
TENNESSEE
MISSISSIPPI
TACAN-NDB
NAVY MEMPHIS
Holly Springs
Cairo
SIKESTON
315
3565
(2000)
1744
994
1000

FLIGHT SUMMARY REPORT

Flight No: 80-054

Date: 18 May 1980

FSR No: 1404

Julian Date: 139

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0751 Support
Requestor: Brooks
#0047 Support
Requestor: Ferry

Area(s) Covered: Minnesota

SENSOR DATA

Accession No:	02883	---
Sensor ID No:	034	024
Sensor Type:	RC-10	APS
Focal Length:	12" 304.66mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/125	---
No. of Frames:	193	---
% Overlap:	60	---
Quality:	Good	---
Remarks:	---	Non-imaging sensor

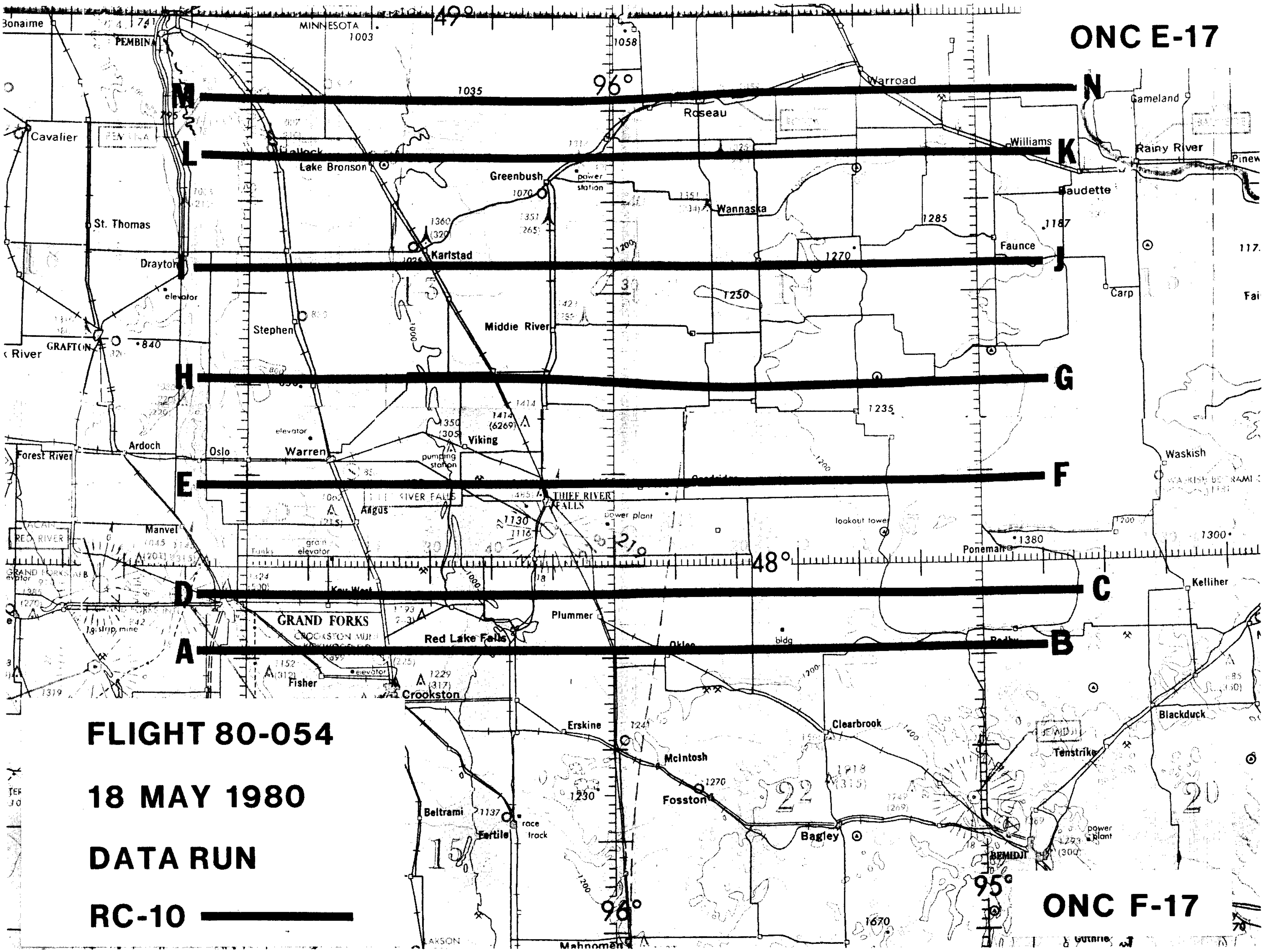
FLIGHT SUMMARY

80-054

This flight was flown in support of Flight Requests #0751 (Brooks, USFWS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over northern Minnesota (see Track Map). Aerosol Particulate Sampler (APS) data was collected throughout the flight although not indicated on the track map.

Thin cirrus was encountered over the entire area in addition to moderate to heavy cumulus over the northeastern part of the area. The photography is rated good quality due to slight degradation caused by the cirrus cloud cover. No camera or processing malfunctions were noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


ONC E-17
ONC F-17
FLIGHT 80-054
18 MAY 1980
DATA RUN
RC-10
M
N
L
K
J
H
G
E
F
D
C
A
B
49°
48°
96°
95°
MINNESOTA
Pembina
Cavalier
St. Thomas
Drayton
Grafton
Ardoch
Forest River
Manvel
Grand Forks
Crookston
Fisher
Red Lake Falls
Plummer
Thief River Falls
Warren
Oslo
Stephen
Argyle
Viking
Middle River
Karlstad
Greenbush
Lake Bronson
Hallock
Roseau
Warroad
Williams
Baudette
Rainy River
Gameland
Faunce
Carp
Wannaska
Waskish
Ponemah
Kelliher
Blackduck
Tenstrike
Bemidji
Bagley
Clearbrook
Fosston
McIntosh
Erskine
Fertile
Beltrami
Mahnomen
Guthrie

FLIGHT SUMMARY REPORT

Flight No: 80-055

Date: 19 May 1980

FSR No: 1405

Julian Date: 140

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0751 Support
Requestor: Brooks
#0047 Support
Requestor: Ferry

Area(s) Covered: Minnesota

SENSOR DATA

Accession No:	02884	---
Sensor ID No:	034	024
Sensor Type:	RC-10	APS
Focal Length:	12" 304.66mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .10B	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/125	---
No. of Frames:	128	---
% Overlap:	60	---
Quality:	Good	---
Remarks:	---	Non-imaging sensor

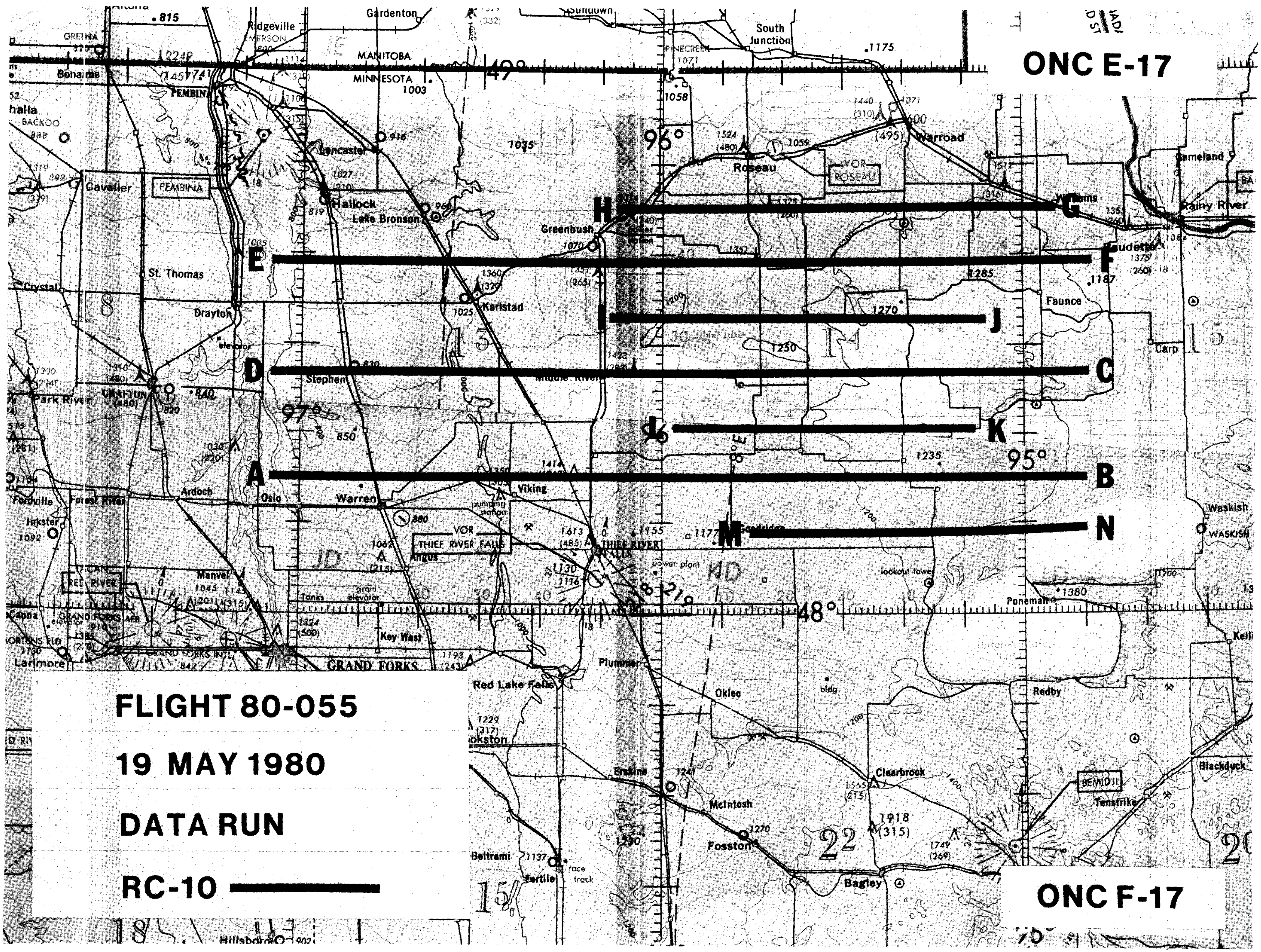
FLIGHT SUMMARY

80-055

This flight was flown in support of Flight Requests #0751 (Brooks, USFWS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over northern Minnesota (see Track Map). Aerosol Particulate Sampler (APS) data was collected throughout the flight above 60,000' (MSL).

Thin cirrus was encountered on all data tracks. The photography is rated good quality due to slight degradation by the cirrus cloud cover. No camera or processing malfunctions were noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


ONC E-17
ONC F-17
FLIGHT 80-055
19 MAY 1980
DATA RUN
RC-10
A
B
C
D
E
F
G
H
I
J
K
L
M
N
MANITOBA
MINNESOTA
49°
48°
96°
97°
95°
Gardenton
Ridgeville
South Junction
Warroad
Roseau
Greenbush
Hallock
Lake Bronson
Lancaster
Cavalier
St. Thomas
Drayton
Karlstad
Stephen
Middle River
Oslo
Warren
Viking
Thief River Falls
Ardoch
Forest River
Grafton
Park River
Key West
Grand Forks
Red Lake Falls
Plummer
Oklee
Erskine
McIntosh
Fosston
Bagley
Clearbrook
Beltrami
Fertile
Redby
Blackduck
Tenstrike
Faunce
Carp
Waskish
Rainy River
Ponemah
Larimore
Hillsboro
Manvel
Bonaime
Crystal
Inkster
Fordville

FLIGHT SUMMARY REPORT

Flight No: 80-056 **Date:** 20 May 1980

FSR No: 1407 **Julian Date:** 141

Sensor Package: Vinten System A
Lightning Detection Experiment (LDE) **Aircraft No:** 5

Purpose of Flight: #0791 Support
Requestor: Vaughan

Area(s) Covered: Mt. St. Helens, Washington

SENSOR DATA

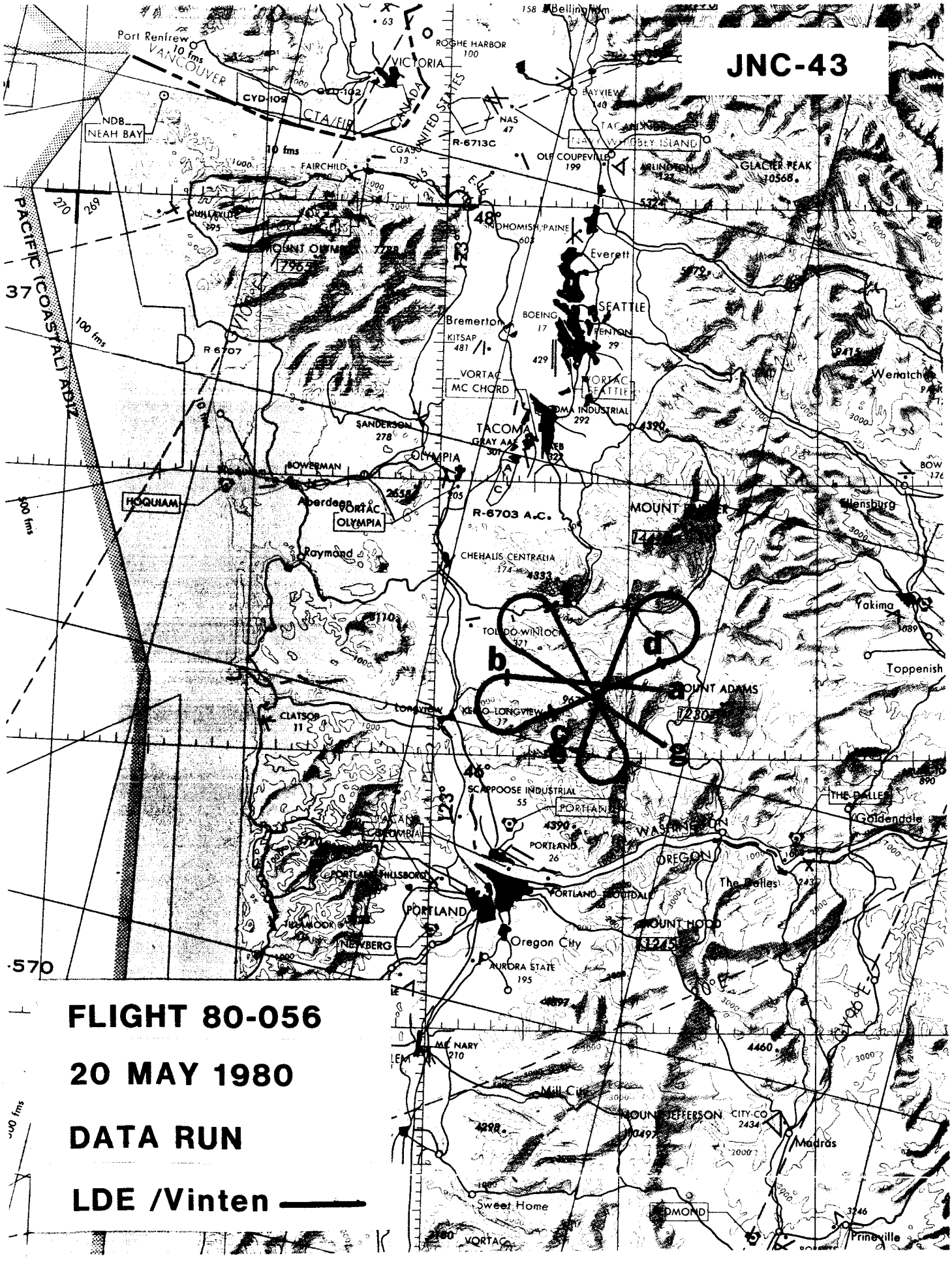
Accession No:	---	---	---	---
Sensor ID No:	001	002	004	064
Sensor Type:	Vinten	Vinten	Vinten	LDE
Focal Length:	1-3/4" 44.5mm	1-3/4" 44.5mm	1-3/4" 44.5mm	---
Film Type:	Plus-X, 2402	Infrared Aerographic, 2424	Panatomic-X, 3400	---
Filtration:	Wratten 12	Wratten 25	Transmission grating	---
Spectral Band:	510-700nm	590-900nm	400-700nm	---
f Stop:	16	22	16	---
Shutter Speed:	1/250	1/250	1/250	---
No. of Frames:	---	---	---	---
% Overlap:	60	60	60	---
Quality:	Good	Good	Good	---
Remarks:	---	---	---	Mag tape data

FLIGHT SUMMARY

80-056

This flight was flown in support of Flight Request #0791 (Vaughan, NASA/MSFC) under the FY 1980 Airborne Instrumentation Research (AIRP) plan. The Lightning Detector Experiment (LDE) was flown over Mt. St. Helens, Washington during a ferry flight of the aircraft from Ellsworth AFB, South Dakota to Moffett Field, California. The track map provided was constructed from heading data recorded during flight. Due to the special application of the photography acquired, it was provided directly to the investigators and not accessioned.

The purpose of the Lightning Detector Experiment is the development of an orbital lightning detector for use on the space shuttle. The experiment consists of four parts; an optical lightning detector which detects visible radiation generated by lightning discharges during either day or night conditions, an electric field antenna which detects variations in the electric field below the aircraft associated with cloud charging and lightning discharge, a lightning spectrometer monitoring spectral distribution of lightning discharges during night conditions, and a Vinten Camera system to acquire data for spectral photographic measurements. Data acquired by the first three parts is recorded on an M-14E tape recorder.


JNC-43
FLIGHT 80-056
20 MAY 1980
DATA RUN
LDE /Vinten
Port Renfrew
VANCOUVER
VICTORIA
CANADA
UNITED STATES
Bellingham
ROCHE HARBOR
NDB
NEAH BAY
CTA/FIR
CYD-103
CGA-102
FAIRCHILD
NAS
R-6713C
OLF COUPEVILLE
GLACIER PEAK
10568.
PACIFIC (COASTAL) ADIZ
MOUNT OLYMPUS
7965
HOQUIAM
Everett
SEATTLE
Bremerton
KITSAP
VORTAC
MC CHORD
BOEING
RENTON
VORTAC SEATTLE
TACOMA
GRAY AAF
SANDERSON
OLYMPIA
BOWERMAN
Aberdeen
VORTAC OLYMPIA
R-6703 A.C.
Raymond
CHEHALIS CENTRALIA
TOLEDO-WINLOCK
Wenatchee
Ellensburg
Yakima
Toppenish
MOUNT ADAMS
12307
KELSO-LONGVIEW
CLATSOP
SCAPPOOSE INDUSTRIAL
PORTLAND
The Dalles
Goldendale
WASHINGTON
OREGON
PORTLAND
HILLSBORO
TROUTDALE
MOUNT HOOD
11245
NEWBERG
Oregon City
AURORA STATE
MC NARY
Mill City
MOUNT JEFFERSON
10497
CITY-CO
Madras
Sweet Home
REDMOND
Prineville
VORTAC
270
269
48°
45°
100 fms
500 fms
10 fms
a
b
d
g

FLIGHT SUMMARY REPORT

Flight No: 80-062

Date: 20 May 1980

FSR No: 1411

Julian Date: 141

Sensor Package: A-4 Configuration
Aerosol Particulate Sampler (APS)

Aircraft No: 4

Purpose of Flight: #0868 Support
Requestor: Weber
#0047 Support
Requestor: Ferry

Area(s) Covered: Mt. St. Helens, Mt. Adams, Yakima, Washington

SENSOR DATA

Accession No:	02885	02886	---
Sensor ID No:	035	037	024
Sensor Type:	RC-10	HR-732	APS
Focal Length:	6" 153.46mm	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-127	High Definition Aerochrome Infrared, SO-127	---
Filtration:	CC .20C + 2.2AV	CC .20C	---
Spectral Band:	510-900nm	510-900nm	---
f Stop:	4	8	---
Shutter Speed:	1/110	1/75	---
No. of Frames:	88	216	---
% Overlap:	80	80	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

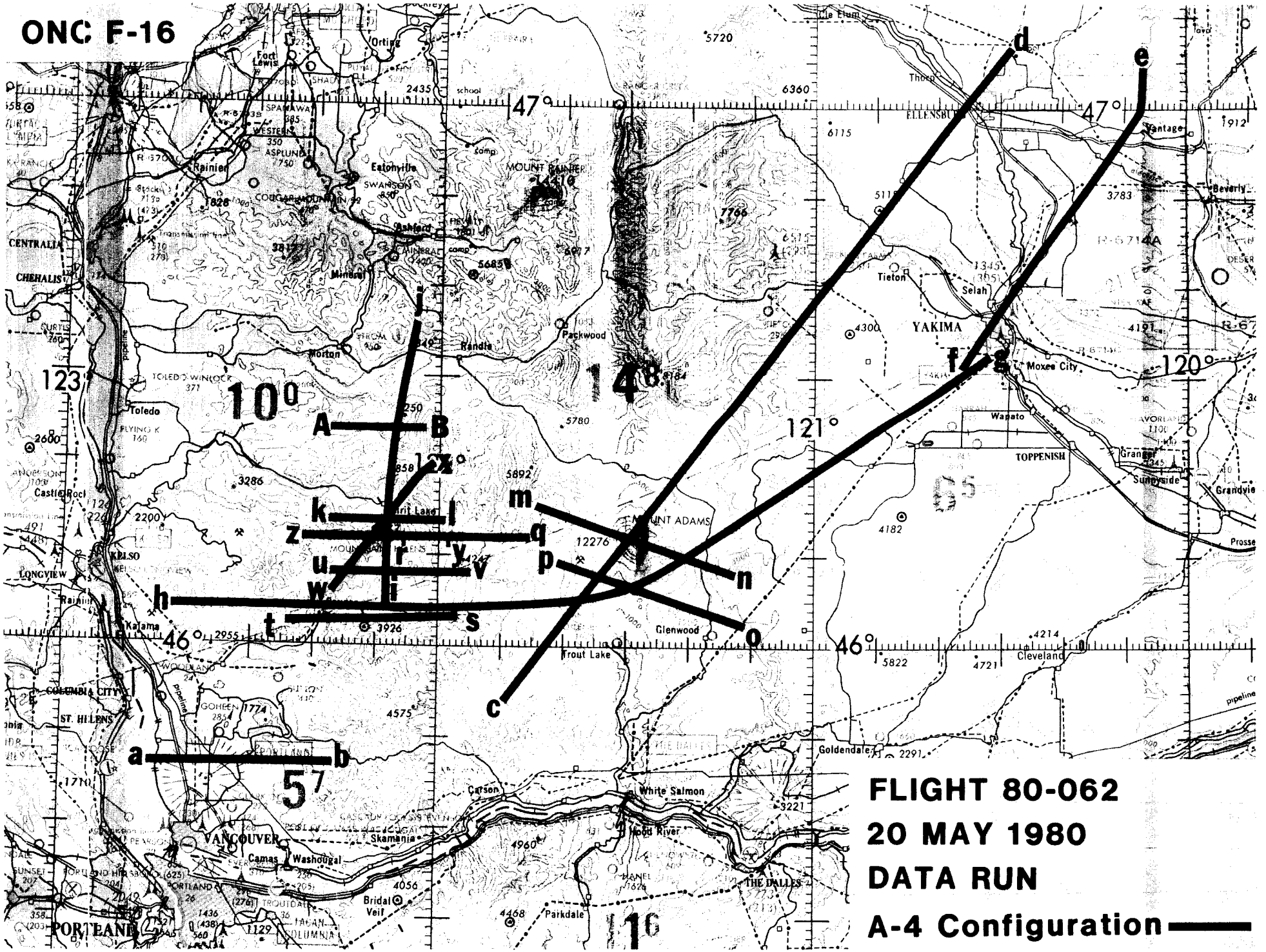
FLIGHT SUMMARY

80-062

This flight was flown in support of Flight Requests #0868 (Weber, USFS), and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photographic coverage of the Mt. St. Helens, Mt. Adams, and Yakima, Washington areas were acquired with the A-4 camera configuration (see Track Map). Aerosol Particulate Sampler (APS) data was collected on descent but is not indicated on the track map.

Extensive cirrus and cumulus cloud cover was encountered on all flight lines. Additionally, heavy smoke and volcanic ash was evident throughout the entire flight. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


ONC F-16
a
b
c
d
e
f
g
h
i
j
k
l
m
n
o
p
q
r
s
t
u
v
w
x
y
z
A
B
10°
12°
14°
46°
47°
120°
121°
123°
Portland
Vancouver
Mount Rainier
Mount Adams
Yakima
Toppenish
Goldendale
White Salmon
Hood River
The Dalles
Trout Lake
Glenwood
Cleveland
Parkdale
Carson
Skamania
Camas
Washougal
Kelso
Longview
Castle Rock
Toledo
Centralia
Chehalis
Randle
Packwood
Morton
Eatonville
Ashford
Tieton
Selah
Wapato
Granger
Sunnyside
Grandview
Prosser
Moxee City
Beverly
Vantage
Ellensburg
Orting
Fort Lewis
Rainier
Kalama
Columbia City
St. Helens
Gobles
Bridal Veil
FLIGHT 80-062
20 MAY 1980
DATA RUN
A-4 Configuration

FLIGHT SUMMARY REPORT

Flight No: 80-065 **Date:** 28 May 1980

FSR No: 1413 **Julian Date:** 149

Sensor Package: Daedalus Multispectral Scanner (DMS) **Aircraft No:** 4

Purpose of Flight: #0774 Support
Requestor: Shelton

Area(s) Covered: Arizona and New Mexico

SENSOR DATA

Accession No:	---
Sensor ID No:	059
Sensor Type:	DMS
Focal Length:	---
Film Type:	---
Filtration:	---
Spectral Band:	.38 - 1.10um 10.4 - 12.5um
f Stop:	---
Shutter Speed:	---
No. of Frames:	---
% Overlap:	---
Quality:	---
Remarks:	Tape data only

FLIGHT SUMMARY

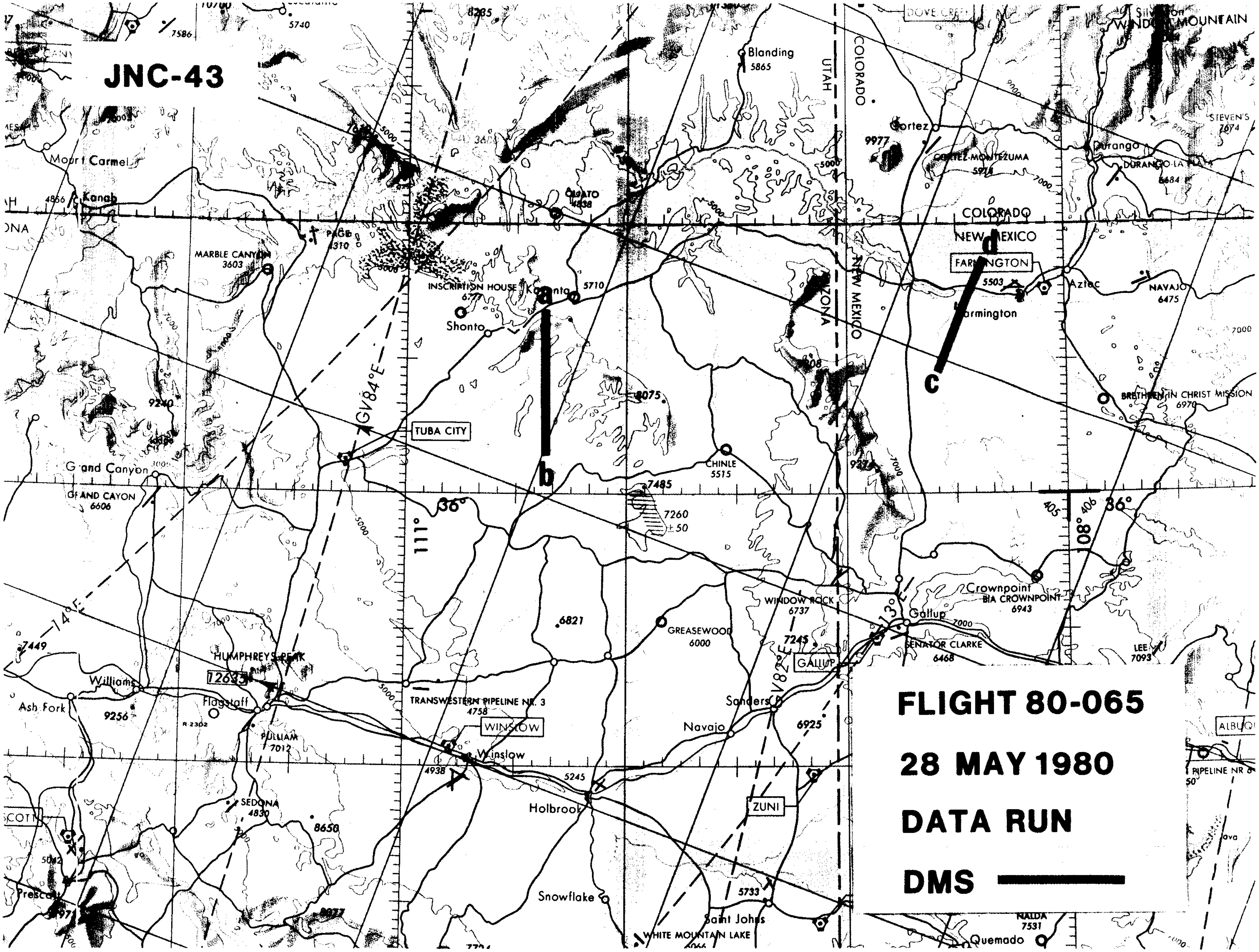
80-065

This flight was flown in support of Flight Request #0774 (Shelton, EPA) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Daedalus Multispectral Scanner (DMS) was acquired over selected areas of Arizona and New Mexico (see Track Map).

The Daedalus Multispectral Scanner is a modified Daedalus DEI-1260 eleven channel scanner. The system is entirely digital, with ten channels in the visible and near visible portions of the spectrum and one channel in the thermal infrared region. The scanner has an IFOV of either 1.25 or 2.5 milliradians depending on the scanhead utilized. Flight data tapes are ground processed to produce computer compatible tapes. Sensor specifications are:

IFOV	1.25mrad	2.5mrad
Pixels/scan line	715	715
Scan angle	42°	85°
Swath width	8nm	18nm
Scan rate	10 lines/sec	10 lines/sec
Resolution (from 65,000 ft)	80 ft	160 ft

Channel 1	38 - .42um	Channel 7	65 - .69um
Channel 2	42 - .45um	Channel 8	70 79um
Channel 3	45 50um	Channel 9	.80 - .89um
Channel 4	50 - .55um	Channel 10	90 - 1.10um
Channel 5	.55 - .60um	Channel 11	10.40 - 12.50um
Channel 6	60 - .65um		



JNC-43
FLIGHT 80-065
28 MAY 1980
DATA RUN
DMS
a
b
c
d
Mount Carmel
Kanab
Page
Marble Canyon
Inscription House
Kayenta
Shonto
Tuba City
Grand Canyon
Williams
Ash Fork
Flagstaff
Humphreys Peak
Sedona
Prescott
Winslow
Holbrook
Snowflake
Saint Johns
White Mountain Lake
Chinle
Greasewood
Window Rock
Gallup
Sanders
Navajo
Zuni
Crownpoint
Senator Clarke
Farmington
Aztec
Cortez
Durango
Blanding
Quemado
Utah
Colorado
Arizona
New Mexico
Transwestern Pipeline No. 3
Brethren in Christ Mission
GV84°E
V82°E
36°
111°
108°

FLIGHT SUMMARY REPORT

Flight No: 80-066 **Date:** 29 May 1980

FSR No: 1414 **Julian Date:** 150

Sensor Package: Daedalus Multispectral Scanner (DMS)
Aerosol Particulate Sampler (APS) **Aircraft No:** 4

Purpose of Flight: #0666 Support (Lumb)
#0777 Support (Estes)
#0047 Support (Ferry)

Area(s) Covered: California

SENSOR DATA

Accession No:	---	---
Sensor ID No:	059	024
Sensor Type:	DMS	APS
Focal Length:	---	---
Film Type:	---	---
Filtration:	---	---
Spectral Band:	.38 - 1.10um 10.4 - 12.5um	---
f-Stop:	---	---
Shutter Speed:	---	---
No. of Frames:	---	---
% Overlap:	---	---
Quality:	---	---
Remarks:	Tape data only	Non-imaging sensor

FLIGHT SUMMARY

80-066

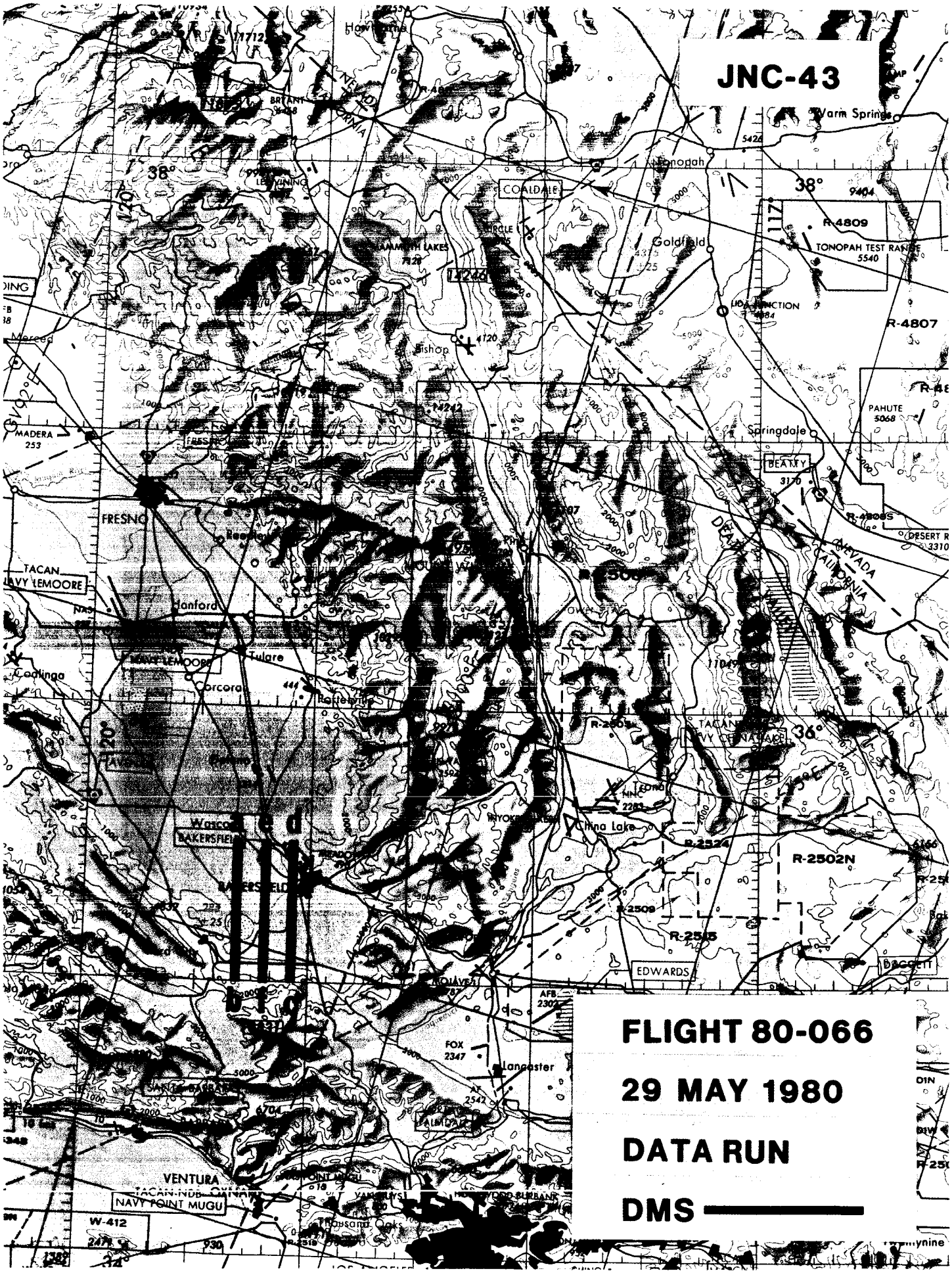
This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ARC), #0777 (Estes, University of California, Santa Barbara) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Daedalus Multispectral Scanner (DMS) data was acquired over three data lines near Bakersfield, California (see Track Map). Aerosol Particulate Sampler (APS) data was collected at selected altitudes during climb.

The Daedalus Multispectral Scanner is a modified Daedalus DEI-1260 eleven channel scanner. The system is entirely digital, with ten channels in the visible and near visible portions of the spectrum and one channel in the thermal infrared region. The scanner has an IFOV of either 1.25 or 2.5 milliradians depending on the scanhead utilized. Flight data tapes are ground processed to produce computer compatible tapes. Sensor specifications are:

IFOV	1.25mrad	2.5mrad
Pixels/scan line	715	715
Scan angle	42°	85°
Swath width	8nm	18nm
Scan rate	10 lines/sec	10 lines/sec
Resolution (from 65,000 ft)	80 ft	160 ft

Channel 1	.38 - .42um	Channel 7	.65 - .69um
Channel 2	.42 - .45um	Channel 8	.70 - .79um
Channel 3	.45 - .50um	Channel 9	.80 - .89um
Channel 4	.50 - .55um	Channel 10	.90 - 1.10um
Channel 5	.55 - .60um	Channel 11	10.40 - 12.50um
Channel 6	.60 - .65um		

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


JNC-43
FLIGHT 80-066
29 MAY 1980
DATA RUN
DMS
Warm Springs
Tonopah
COALDALE
Goldfield
R-4809
TONOPAH TEST RANGE
5540
R-4807
Bishop
PAHUTE
5068
Springdale
BEATTY
3170
FRESNO
MADERA
253
TACAN
NAVY LEMOORE
Hanford
Tulare
Corcoran
Wasco
BAKERSFIELD
China Lake
R-2524
R-2502N
R-2508
R-2515
EDWARDS
Lancaster
VENTURA
TACAN-NDB
NAVY POINT MUGU
W-412
NEVADA
CALIFORNIA

FLIGHT SUMMARY

80-067

This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ARC), #0777 (Estes, University of California, Santa Barbara) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Daedalus Multispectral Scanner (DMS) data was acquired along three data tracks near Bakersfield, California (see Track Map). Aerosol Particulate Sampler (APS) data was collected during descent at selected altitudes.

The Daedalus Multispectral Scanner is a modified Daedalus DEI-1260 eleven channel scanner. The system is entirely digital, with ten channels in the visible and near visible portions of the spectrum and one channel in the thermal infrared region. The scanner has an IFOV of either 1.25 or 2.5 milliradians depending on the scanhead utilized. Flight data tapes are ground processed to produce computer compatible tapes. Sensor specifications are:

IFOV	1.25mrad	2.5mrad
Pixels/scan line	715	715
Scan angle	42°	85°
Swath width	8nm	18nm
Scan rate	10 lines/sec	10 lines/sec
Resolution (from 65,000 ft)	80 ft	160 ft

Channel 1	.38 - .42um	Channel 7	.65 - .69um
Channel 2	.42 - .45um	Channel 8	.70 - .79um
Channel 3	.45 - .50um	Channel 9	.80 - .89um
Channel 4	.50 - .55um	Channel 10	.90 - 1.10um
Channel 5	.55 - .60um	Channel 11	10.40 - 12.50um
Channel 6	.60 - .65um		

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.

FLIGHT SUMMARY REPORT

Flight No: 80-067

Date: 3 June 1980

FSR No: 1415

Julian Date: 155

Sensor Package: Daedalus Multispectral Scanner (DMS)
Aerosol Particulate Sampler (APS)

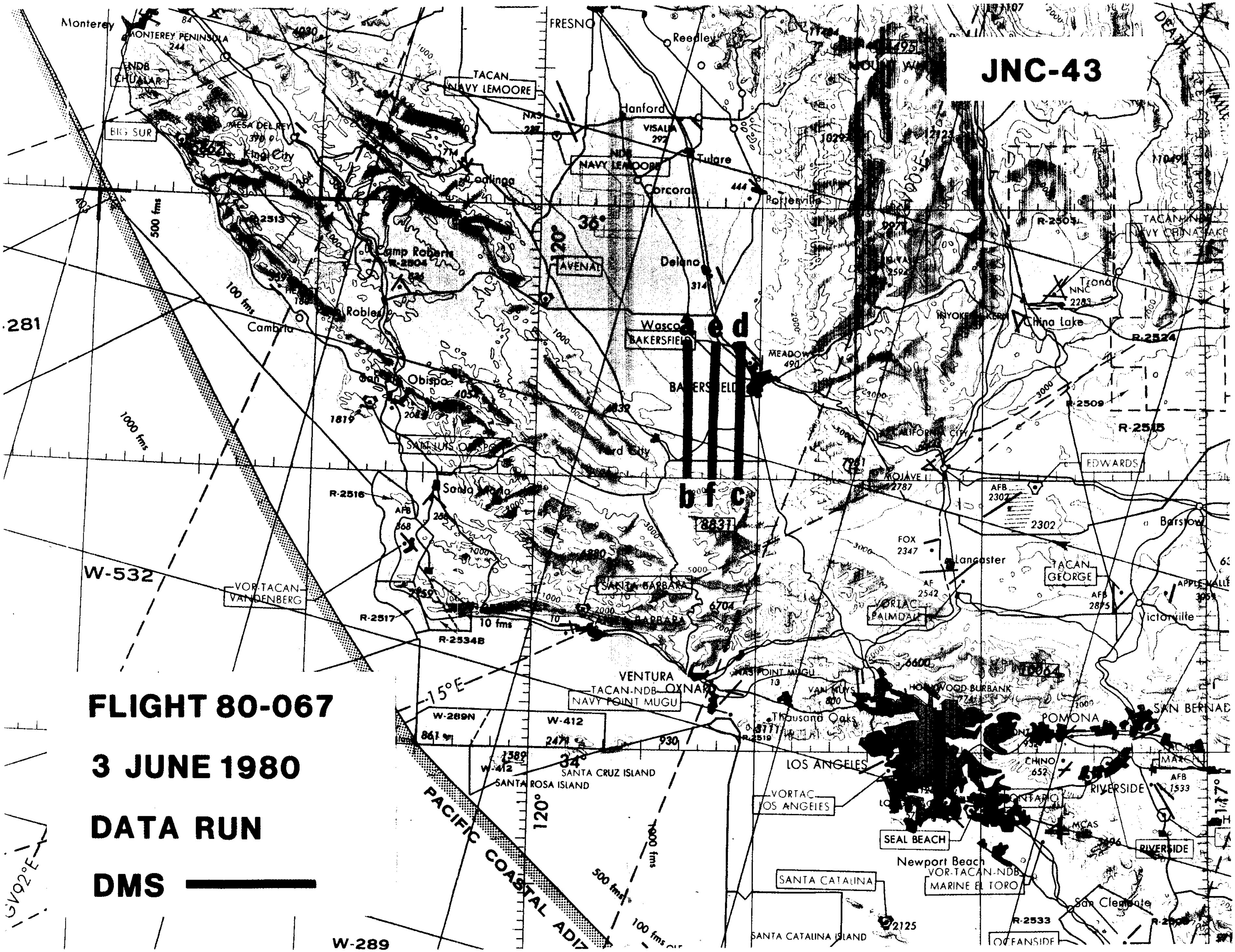
Aircraft No: 4

Purpose of Flight: #0666 Support (Lumb)
#0777 Support (Estes)
#0047 Support (Ferry)

Area(s) Covered: California

SENSOR DATA

Accession No:	---	---
Sensor ID No:	059	024
Sensor Type:	DMS	APS
Focal Length:	---	---
Film Type:	---	---
Filtration:	---	---
Spectral Band:	.38 - 1.10um 10.4 - 12.5um	---
f Stop:	---	---
Shutter Speed:	---	---
No. of Frames:	---	---
% Overlap:	---	---
Quality:	---	---
Remarks:	Tape data only	Non-imaging sensor



FLIGHT 80-067

3 JUNE 1980

DATA RUN

DMS ———

FLIGHT SUMMARY REPORT

Flight No: 80-068

Date: 9 June 1980

FSR No: 1416

Julian Date: 161

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 4

Purpose of Flight: #0666Y Support
Requestor: Lumb
#0047 Support
Requestor: Ferry

Area(s) Covered: Sacramento Valley, California

SENSOR DATA

Accession No:	02888	---
Sensor ID No:	036	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.19mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC.20B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/75	---
No. of Frames:	127	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

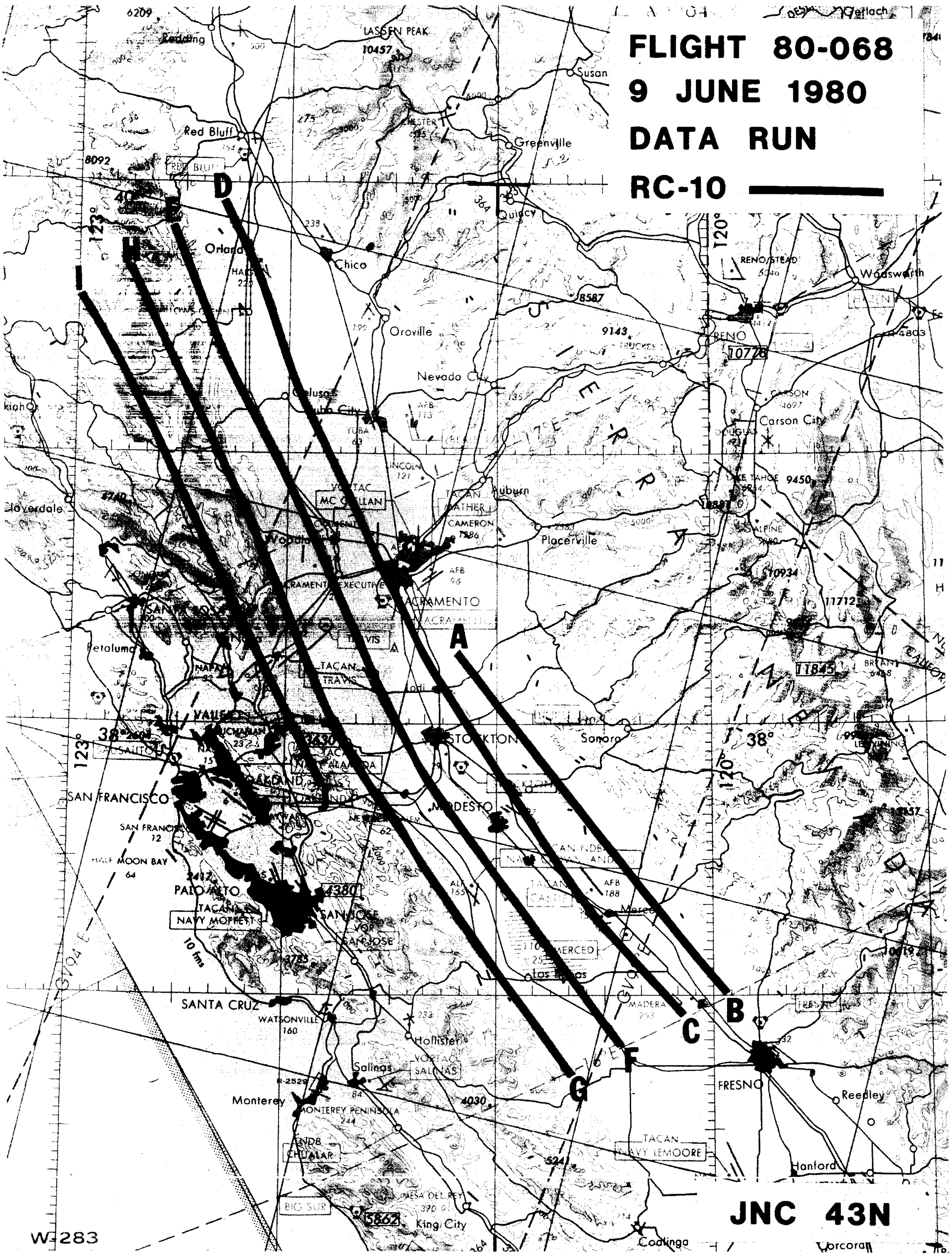
FLIGHT SUMMARY

80-068

This flight was flown in support of Flight Requests #0666Y (Lumb, NASA/ARC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photographic coverage was obtained over the Sacramento Valley, California (see Track Map). Additionally, Aerosol Particulate Sampler (APS) data was collected but is not depicted on the track map.

The entire area was cloud free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


FLIGHT 80-068
9 JUNE 1980
DATA RUN
RC-10
JNC 43N
A
B
C
D
E
F
G
H
I
Redding
LASSEN PEAK
10457
Susan
Red Bluff
Greenville
Quincy
Orland
Chico
RENO/STEAD
Wadsworth
Oroville
RENO
Nevada City
Carson City
Auburn
Cloverdale
Placerville
SACRAMENTO
Petaluma
TRAVIS
Lodi
VALLEJO
STOCKTON
Sonora
SAN FRANCISCO
MODESTO
HALF MOON BAY
PALO ALTO
NAVY MOFFETT
SAN JOSE
Merced
MERCED
Los Banos
SANTA CRUZ
WATSONVILLE
MADERA
Hollister
Salinas
FRESNO
Monterey
MONTEREY PENINSULA
Reedley
NAVY LEMOORE
Hanford
BIG SUR
King City
Coalinga
Corcoran
W-283

FLIGHT SUMMARY REPORT

Flight No: 80-070

Date: 11 June 1980

FSR No: 1418

Julian Date: 163

Sensor Package: HR-732
Aerosol Particulate Sampler (APS)

Aircraft No: 4

Purpose of Flight: #0666 Support
Requestor: Lumb
#0047 Support
Requestor: Ferry

Area(s) Covered: Southern Arizona

SENSOR DATA

Accession No:	02889	---
Sensor ID No:	039	024
Sensor Type:	HR-732	APS
Focal Length:	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-127	---
Filtration:	CC .10B	---
Spectral Band:	510-900nm	---
f Stop:	8	---
Shutter Speed:	1/75	---
No. of Frames:	98	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

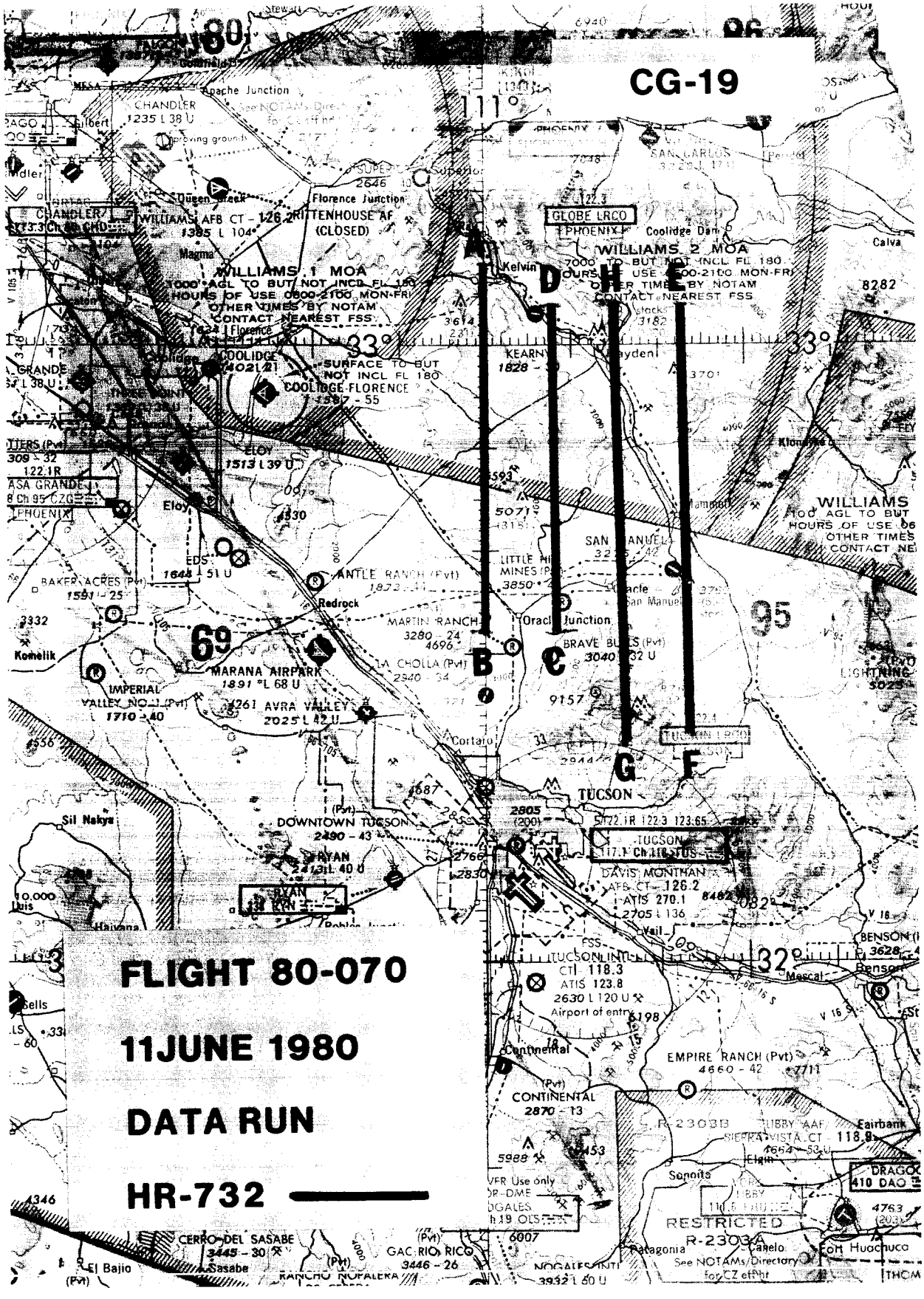
FLIGHT SUMMARY

80-070

This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ARC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. HR-732 photography was acquired over an area in southern Arizona (see Track Map). Aerosol Particulate Sampler (APS) data was also collected at stepped altitudes during climb out, but are not depicted on the track map.

The entire area was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


CG-19
FLIGHT 80-070
11JUNE 1980
DATA RUN
HR-732
WILLIAMS 1 MOA
7000' AGL TO BUT NOT INCL FL 180
HOURS OF USE 0800-2100 MON-FRI
OTHER TIMES BY NOTAM
CONTACT NEAREST FSS
WILLIAMS 2 MOA
7000' TO BUT NOT INCL FL 180
HOURS OF USE 0800-2100 MON-FRI
OTHER TIMES BY NOTAM
CONTACT NEAREST FSS
SURFACE TO BUT NOT INCL FL 180
COOLIDGE-FLORENCE
A
B
C
D
E
F
G
H
TUCSON
DOWNTOWN TUCSON
MARANA AIRPARK
RYAN
DAVIS MONTHAN
TUCSON INTL
CONTINENTAL
EMPIRE RANCH (Pvt)
RESTRICTED
R-2303A
R-2303B
Florence Junction
WILLIAMS AFB CT - 126.2
RITTENHOUSE AF
(CLOSED)
GLOBE LRCO
PHOENIX
Coolidge Dam
Apache Junction
CHANDLER
COOLIDGE
ELOY
Eloy
Redrock
MARTIN RANCH
Oracle Junction
BRAVE BULLS (Pvt)
LA CHOLLA (Pvt)
ANTLE RANCH (Pvt)
BAKER ACRES (Pvt)
IMPERIAL VALLEY NO 1 (Pvt)
AVRA VALLEY
Cortaro
Sil Nakya
Continental
Sonoita
Patagonia
Canelo
Fort Huachuca
NOGALES INTL
CERRO DEL SASABE
GAC RIO RICO
RANCHO NOPALERA
El Bajio
Sasabe
WILLIAMS
Kelvin
Mammoth
Klondyke
Mescal
Benson
Fairbank
Elgin
Vail
Komelik
Sells
Havana
Luis
Calva
Hayden
KEARNY
SAN MANUEL
LITTLE HI MINES (Pvt)
LIGHTNING
DRAGOON
THOM

FLIGHT SUMMARY REPORT

Flight No: 80-073

Date: 16 June 1980

FSR No: 1421

Julian Date: 168

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 4

Purpose of Flight: #0805 Support
Requestor: Colwell
#0047 Support
Requestor: Ferry

Area(s) Covered: Plumas National Forest, California

SENSOR DATA

Accession No:	02890	---
Sensor ID No:	034	024
Sensor Type:	RC-10	APS
Focal Length:	12" 304.66mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20B	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/125	---
No. of Frames:	289	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

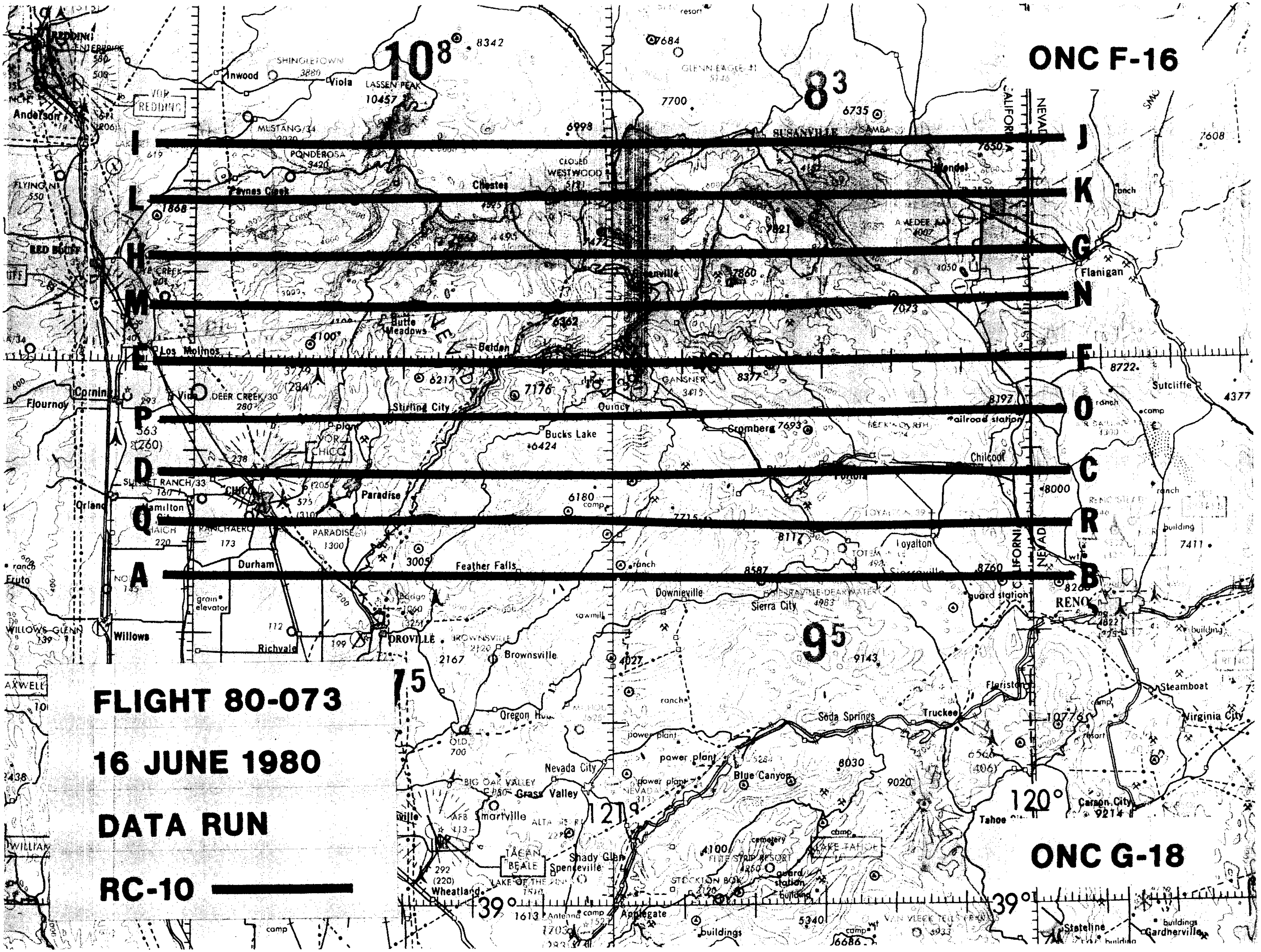
FLIGHT SUMMARY

80-073

This flight was flown in support of Flight Requests #0805 (Colwell, UCSB) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over the Plumas National Forest in California (see Track Map). Aerosol Particulate Sampler (ASP) data was collected at selected altitudes during climb out of Moffett Field.

Some minor cumulus was encountered over the higher mountainous areas of the Plumas Forest area. The photography is excellent quality with no camera or processing malfunctions noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


ONC F-16
ONC G-18
FLIGHT 80-073
16 JUNE 1980
DATA RUN
RC-10
I
L
H
M
E
P
D
Q
A
J
K
G
N
F
O
C
R
B
Susanville
Chester
Westwood
Quincy
Bucks Lake
Stirling City
Paradise
Chico
Durham
Orland
Willows
Corning
Red Bluff
Redding
Anderson
Oroville
Feather Falls
Downieville
Sierra City
Loyalton
Reno
Truckee
Nevada City
Grass Valley
Carson City
Virginia City
120°
39°

FLIGHT SUMMARY REPORT

Flight No: 80-078

Date: 19 June 1980

FSR No: 1424

Julian Date: 171

Sensor Package: A-4 Configuration

Aircraft No: 5

Purpose of Flight: #0868 Support
Requestor: Weber

Area(s) Covered: Gifford Pinchot National Forest, Washington

SENSOR DATA

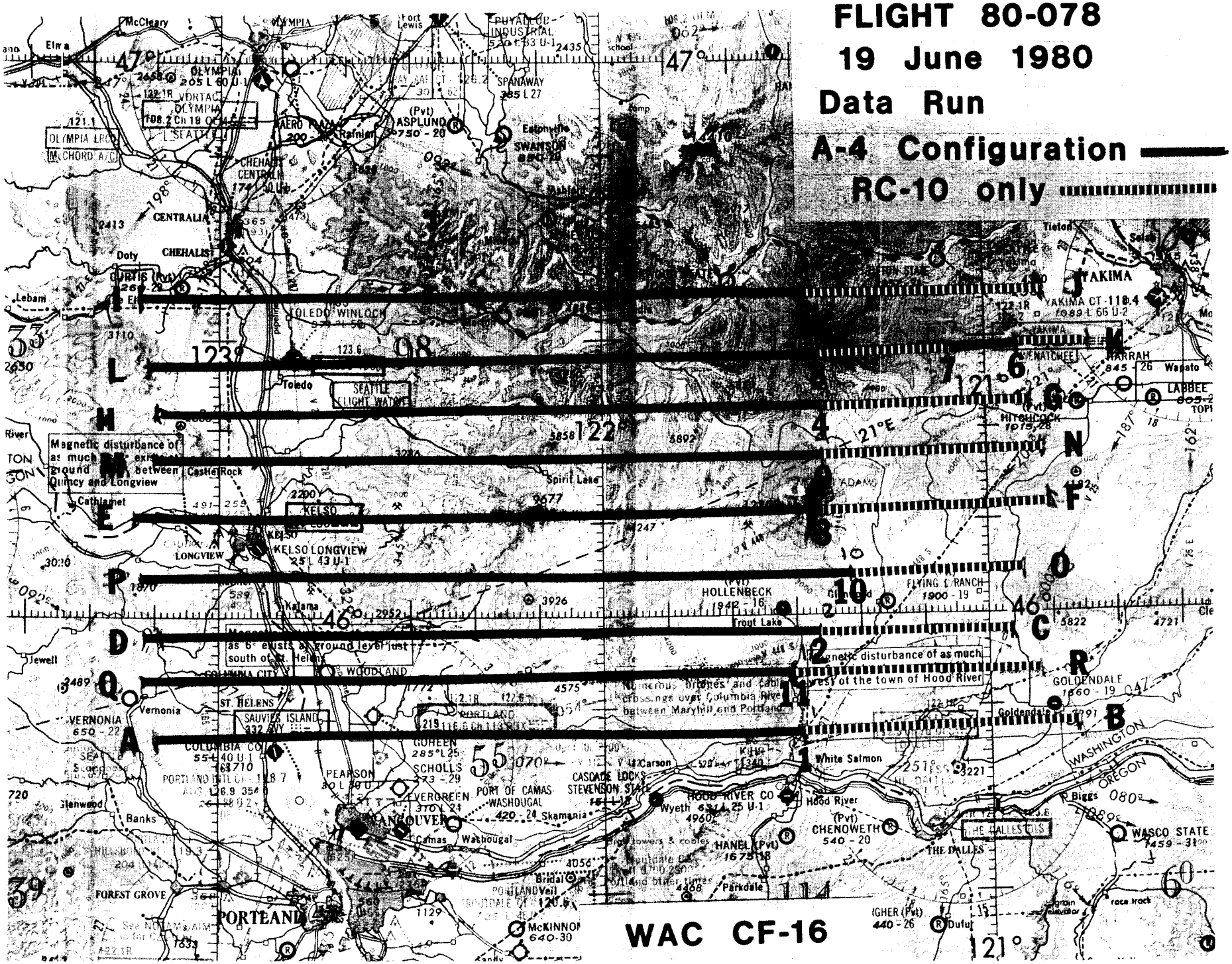
Accession No:	02891	02892
Sensor ID No:	035	039
Sensor Type:	RC-10	HR-732
Focal Length:	6" 153.46mm	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-127	High Definition Aerochrome Infrared, SO-127
Filtration:	CC .20C + 2.2AV	CC .20C
Spectral Band:	510-900nm	510-900nm
f Stop:	4	8
Shutter Speed:	1/110	1/75
No. of Frames:	143	363
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-078

This flight was flown in support of Flight Request #0868 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. A-4 configuration data was collected over the Gifford Pinchot National Forest, Washington (see Track Map). Due to film load limitations, the HR-732 camera was operated over a shorter distance on each flight line as depicted on the track map.

The entire area was virtually cloud-free with minor cumulus encountered in isolated areas. Due to the multiple eruptions of Mt. St. Helens and the resulting ash fallout, the reflectance characteristics are biased giving the appearance of poor color balance. In areas of minor ash deposition the color balance appears "normal". The RC-10 lens identification illumination was not functioning, however this does not seriously degrade the imagery. No processing or other camera malfunctions were noted and the quality of the data is rated excellent.


FLIGHT 80-078
19 June 1980
Data Run
A-4 Configuration
RC-10 only
WAC CF-16
Magnetic disturbance of as much as 6° exists at ground level between Quincy and Longview
Magnetic disturbance of as much as 6° exists at ground level just south of St. Helens
Numerous bridges and cables crossings over Columbia River between Maryhill and Portland
Magnetic disturbance of as much as 6° exists at ground level just west of the town of Hood River
A
B
C
D
E
F
G
H
J
K
L
M
N
P
Q
R
1
2
3
4
5
6
7
8
9
10
11
12

FLIGHT SUMMARY REPORT

Flight No: 80-080

Date: 23 June 1980

FSR No: 1425

Julian Date: 175

Sensor Package: A-4 Configuration

Aircraft No: 5

Purpose of Flight: Camera Test

Area(s) Covered: California

SENSOR DATA

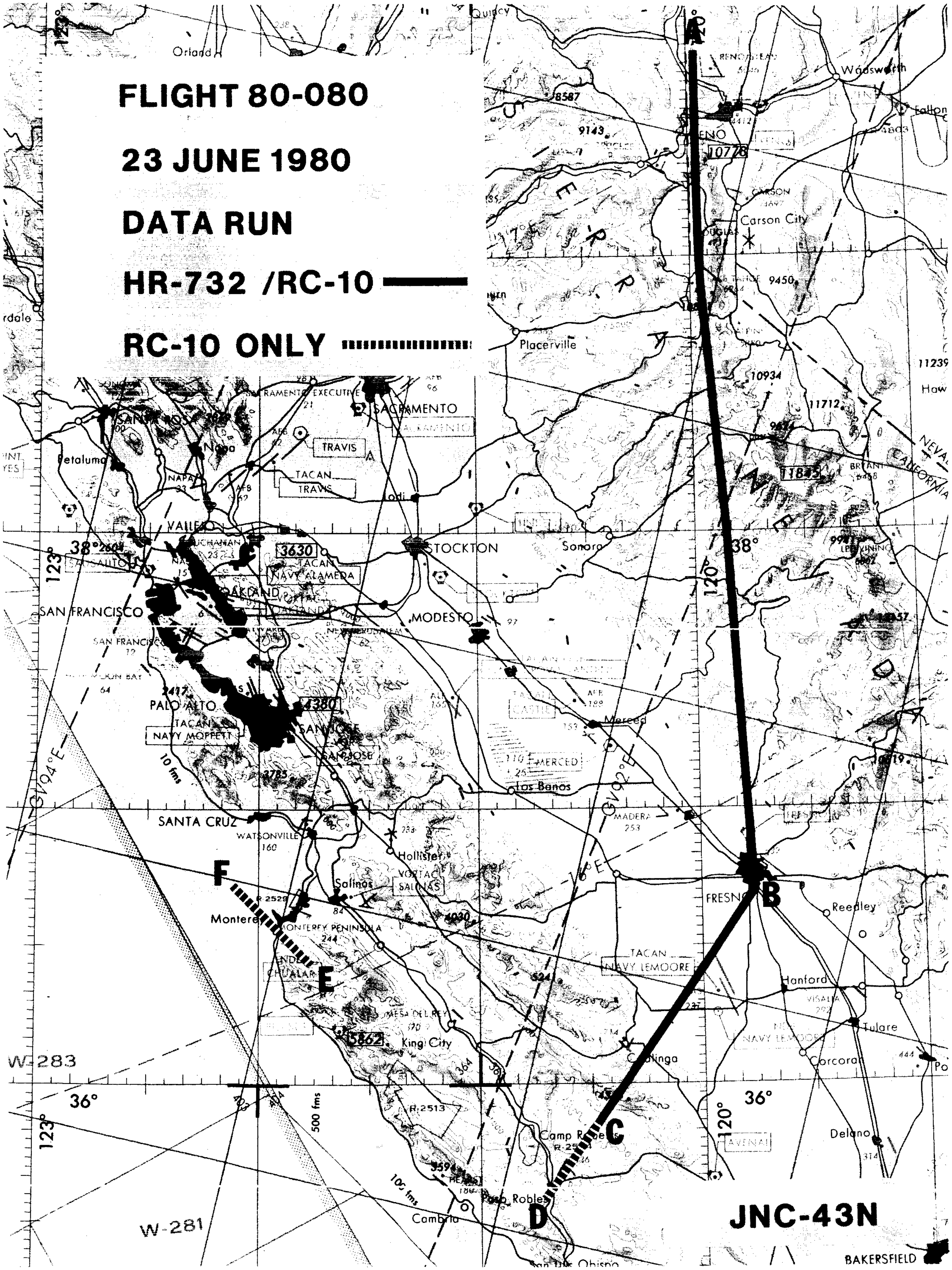
Accession No:	02893	02894
Sensor ID No:	035	039
Sensor Type:	RC-10	HR-732
Focal Length:	6" 153.46mm	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-131	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .20B + 2.2AV	CC .20B
Spectral Band:	510-900nm	510-900nm
f Stop:	4	8
Shutter Speed:	1/75	1/75
No. of Frames:	46	141
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-080

This flight was a camera test flight of the A-4 Configuration in support of the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over central California (see Track Map).

The photography is clear except for some minor cumulus encountered north of Lake Tahoe. The quality of the photography is excellent. With the exception of the illumination of the frame counter on the RC-10 camera, no other camera or processing malfunctions were noted.


FLIGHT 80-080
23 JUNE 1980
DATA RUN
HR-732 /RC-10
RC-10 ONLY
A
B
C
D
E
F
JNC-43N
Reno
Carson City
Placerville
Sacramento
Travis
Stockton
Sonora
Oakland
San Francisco
Modesto
Merced
Palo Alto
Navy Moffett
San Jose
Los Banos
Santa Cruz
Watsonville
Hollister
Salinas
Monterey
Fresno
Reedley
Navy Lemoore
Hanford
Tulare
King City
Coalinga
Corcoran
Camp Roberts
Paso Robles
Cambria
Delano
Bakersfield
W-283
W-281
Petaluma
Napa
Lodi
Wadsworth
Fallon
Madera
Visalia
Orland
Quincy

FLIGHT SUMMARY REPORT

Flight No: 80-081

Date: 25 June 1980

FSR No: 1426

Julian Date: 177

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0666 Support
Requestor: Lumb
#0047 Support
Requestor: Ferry

Area(s) Covered: Colorado

SENSOR DATA

Accession No:	02895	---
Sensor ID No:	035	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.46mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/75	---
No. of Frames:	90	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

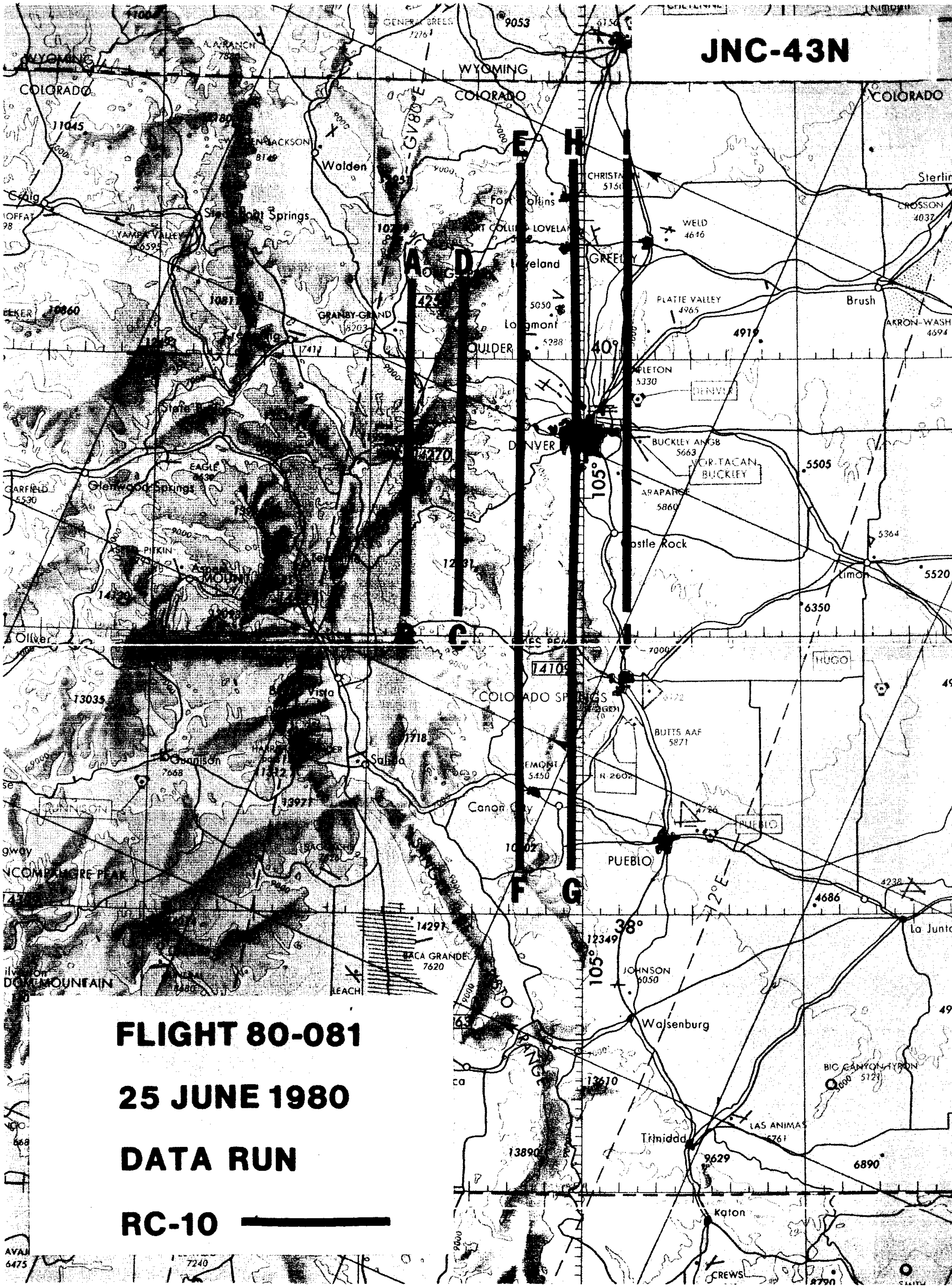
FLIGHT SUMMARY

80-081

This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ARC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over central Colorado (see Track Map). Aerosol Particulate Sampler (APS) data was collected throughout the flight although not indicated on the track map.

Moderate to heavy cumulus clouds were encountered over the mountainous areas flown over during the flight. No camera or processing malfunctions were noted except for the frame counter not being illuminated. The quality of the photography acquired is excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



FLIGHT 80-081

25 JUNE 1980

DATA RUN

RC-10

FLIGHT SUMMARY REPORT

Flight No: 80-082

Date: 25 June 1980

FSR No: 1427

Julian Date: 177

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 4

Purpose of Flight: #0666 Support
Requestor: Lumb
#0047 Support
Requestor: Ferry

Area(s) Covered: Colorado

SENSOR DATA

Accession No:	02896	---
Sensor ID No:	036	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.19mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/75	---
No. of Frames:	78	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

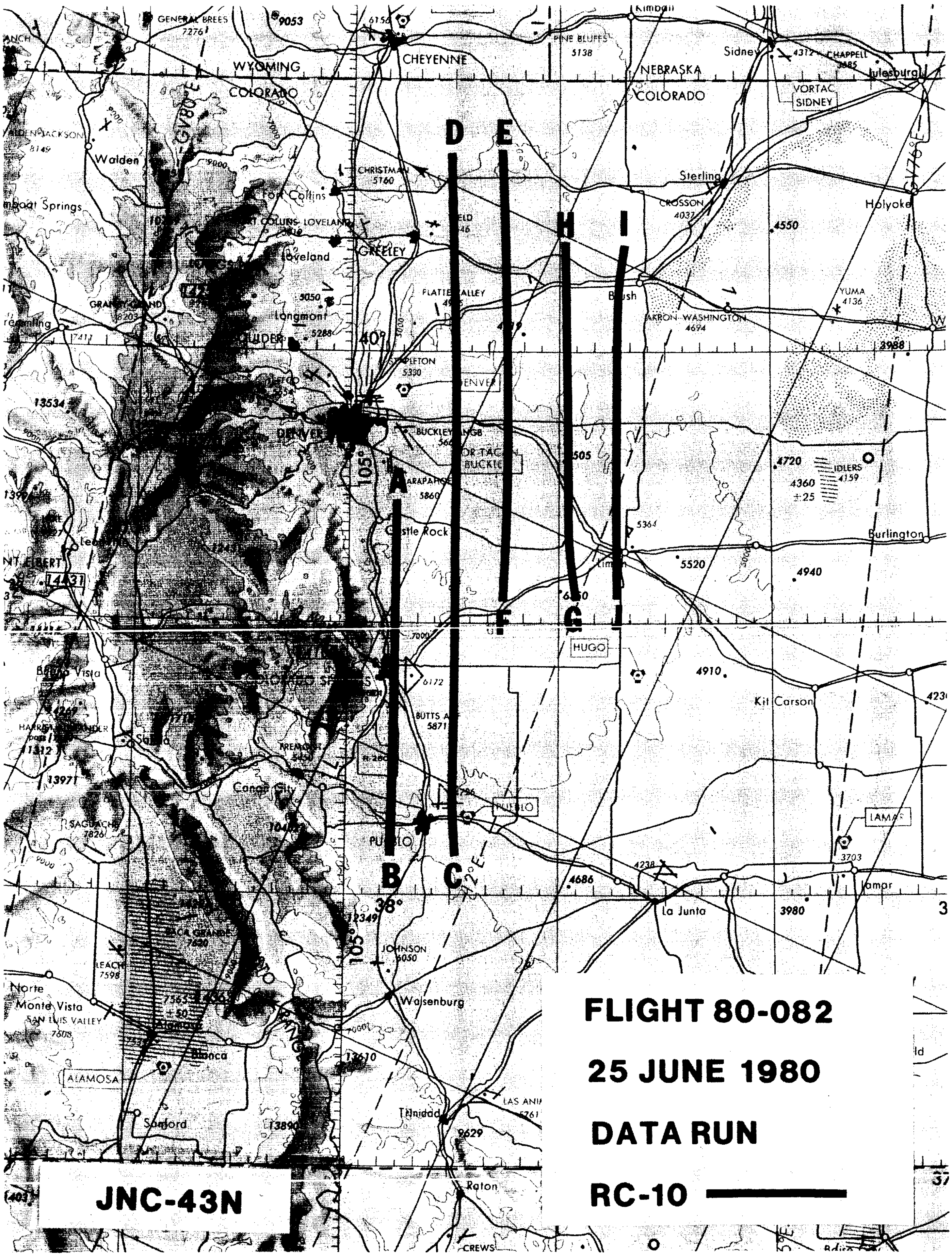
FLIGHT SUMMARY

80-082

This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ARC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over central Colorado (see Track Map). Aerosol Particulate Sampler (APS) data was collected at selected altitudes during climb and descent over California.

The area was clear except for some minor cumulus encountered along the first data line near Colorado Springs. The photography is excellent quality with no camera or processing malfunctions noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



FLIGHT 80-082

25 JUNE 1980

DATA RUN

RC-10

JNC-43N

FLIGHT SUMMARY REPORT

Flight No: 80-084

Date: 30 June 1980

FSR No: 1428

Julian Date: 182

Sensor Package: A-4 Configuration

Aircraft No: 5

Purpose of Flight: #0666 Support
Requestor: Lumb

Area(s) Covered: Washington and Idaho

SENSOR DATA

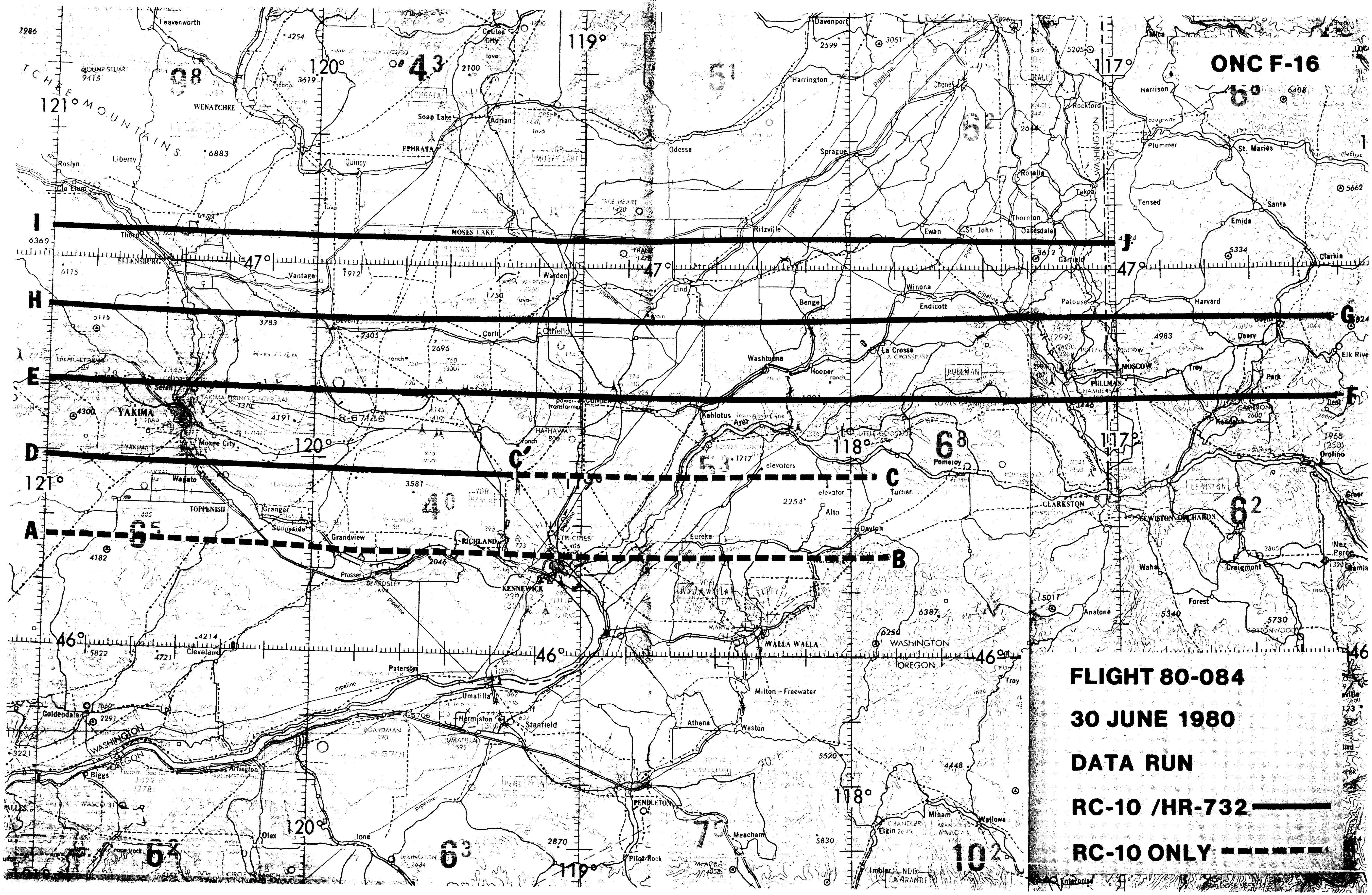
Accession No:	02897	02898
Sensor ID No:	035	039
Sensor Type:	RC-10	HR-732
Focal Length:	6" 153.46mm	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-127	High Definition Aerochrome Infrared, SO-127
Filtration:	CC .20 + 2.2AV	CC .20C
Spectral Band:	510-900nm	510-900nm
f Stop:	4	8
Shutter Speed:	1/110	1/75
No. of Frames:	134	376
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-084

This flight was flown in support of Flight Request #0666 (Lumb, NASA/ ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The A-4 Camera Configuration was utilized to acquire photography over Washington and Idaho east of Mt. St. Helens (see Track Map).

The area was clear except for some very minor cumulus over the mountainous areas. The photography is excellent quality with no camera or processing malfunctions noted.



ONC F-16
FLIGHT 80-084
30 JUNE 1980
DATA RUN
RC-10 /HR-732
RC-10 ONLY
I
J
H
G
E
F
D
C'
C
A
B
YAKIMA
WENATCHEE
ELLENSBURG
MOSES LAKE
EPHRATA
TOPPENISH
RICHLAND
KENNEWICK
WALLA WALLA
PENDLETON
CLARKSTON
MOSCOW
PULLMAN
Ritzville
Odessa
Othello
Kahlotus
Pomeroy
Dayton
Prosser
Sunnyside
Grandview
Umatilla
Hermiston
Goldendale

FLIGHT SUMMARY REPORT

Flight No: 80-085 **Date:** 30 June 1980

FSR No: 1429 **Julian Date:** 182

Sensor Package: Dual RC-10 **Aircraft No:** 4

Purpose of Flight: #0812 Support
Requestor: Schrumph

Area(s) Covered: Willamette Valley, Oregon

SENSOR DATA

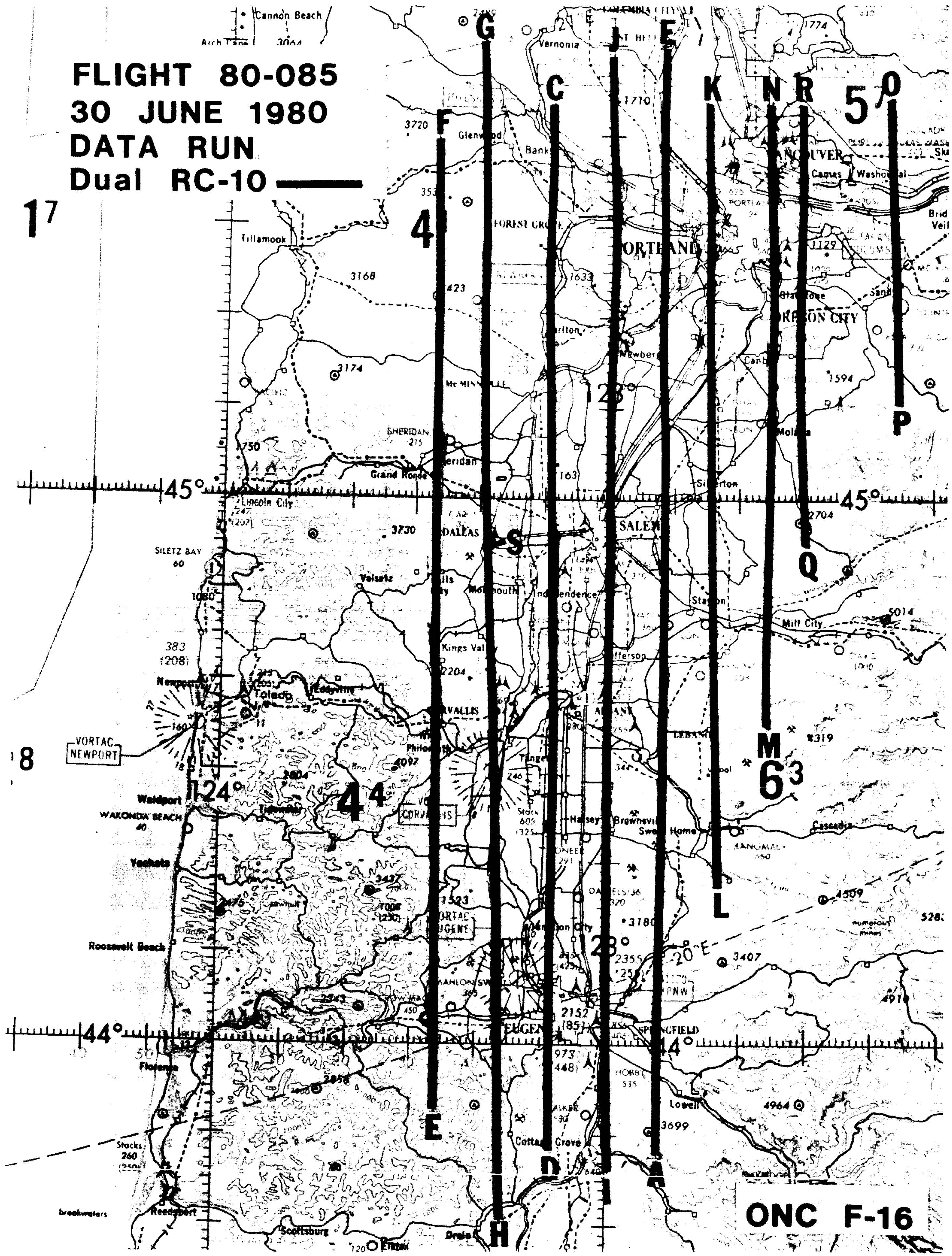
Accession No:	02899	02900
Sensor ID No:	026	034
Sensor Type:	RC-10	RC-10
Focal Length:	12" 304.97mm	12" 304.66mm
Film Type:	High Definition Aerochrome Infrared, SO-131	Natural Color, SO-242
Filtration:	CC .30C	NONE
Spectral Band:	510-900nm	400-700nm
f Stop:	4	4
Shutter Speed:	1/150	1/250
No. of Frames:	272	273
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-085

This flight was flown in support of Flight Request #0812 (Schrumph, Oregon State University) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The Dual RC-10 (12") camera was utilized to acquire photography over the Willamette Valley, Oregon (see Track Map).

The area was clear except for some very minor cumulus on one flight line. No camera or processing malfunctions were noted and the quality of the photography is rated excellent.



FLIGHT 80-085
30 JUNE 1980
DATA RUN
Dual RC-10
ONC F-16
45°
44°
124°
Tillamook
Lincoln City
Siletz Bay
Newport
Toledo
Waldport
Wakonda Beach
Yachats
Roosevelt Beach
Florence
Reedsport
Scottsburg
Vernonia
Glenwood
Banks
Forest Grove
Portland
Vancouver
Camas
Washougal
Newberg
Oregon City
Canby
Molalla
McMinnville
Sheridan
Grand Ronde
Salem
Dallas
Monmouth
Independence
Silverton
Stayton
Mill City
Jefferson
Corvallis
Philomath
Albany
Lebanon
Tangent
Halsey
Brownsville
Sweet Home
Cascadia
Junction City
Eugene
Springfield
Lowell
Cottage Grove
Drain
Elkton
VORTAC NEWPORT
A B C D E F G H I J K L M N O P Q R S

FLIGHT SUMMARY REPORT

Flight No: 80-086

Date: 1 July 1980

FSR No: 1430

Julian Date: 183

Sensor Package: A-4 Configuration

Aircraft No: 4

Purpose of Flight: #0666 Support
Requestor: Lumb
#0862 Support
Requestor: Weber

Area(s) Covered: Washington, Idaho, Oregon

SENSOR DATA

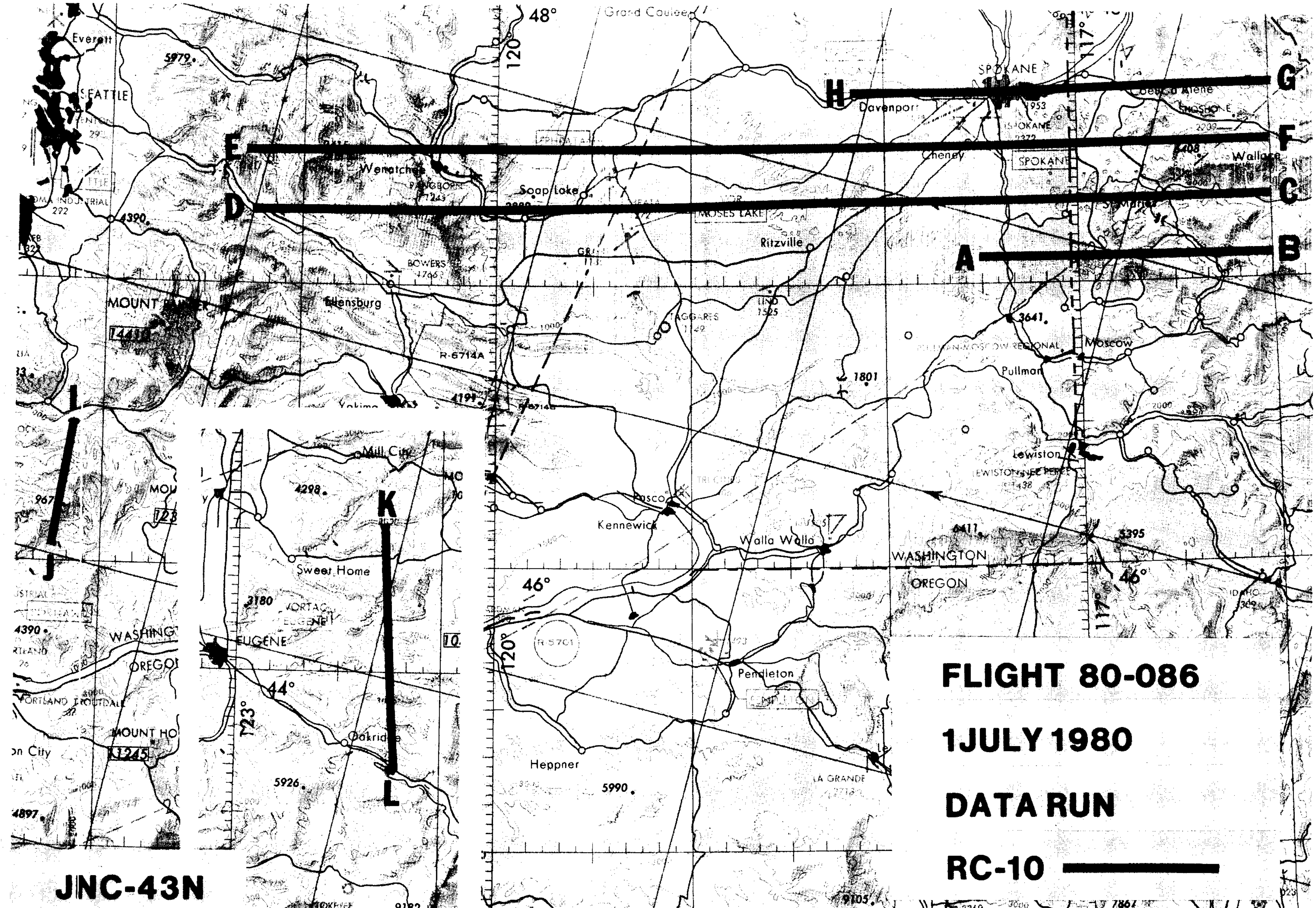
Accession No:	02901
Sensor ID No:	035
Sensor Type:	RC-10
Focal Length:	6" 153.46mm
Film Type:	High Definition Aerochrome Infrared, SO-127
Filtration:	CC .20B + 2.2AV
Spectral Band:	510-900nm
f Stop:	4
Shutter Speed:	1/110
No. of Frames:	99
% Overlap:	60
Quality:	Excellent
Remarks:	---

FLIGHT SUMMARY

80-086

This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ ARC) and #0862 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over Washington and Idaho for Lumb and over Mt. St. Helens and an area in Oregon for Weber (see Track Map).

The flight was clear except for some minor cumulus encountered on the last data line over Oregon. Although the A-4 Configuration was used, the HR-732 camera failed providing only RC-10 photography which is excellent quality. No other camera or processing malfunctions were noted.



FLIGHT 80-086
1JULY 1980
DATA RUN
RC-10
JNC-43N
A
B
C
D
E
F
G
H
I
J
K
L
Spokane
Davenport
Cheney
Wenatchee
Soap Lake
Moses Lake
Ritzville
Ellensburg
Yakima
Mount Rainier
Seattle
Everett
Pasco
Kennewick
Walla Walla
Pendleton
Heppner
Lewiston
Pullman
Moscow
Wallace
Grand Coulee
Mill City
Sweet Home
Eugene
Oakridge
Washington
Oregon
La Grande
48°
46°
44°
120°
117°
123°

FLIGHT SUMMARY REPORT

Flight No: 80-089 **Date:** 18 July 1980

FSR No: 1432 **Julian Date:** 200

Sensor Package: Dual RC-10 **Aircraft No:** 5

Purpose of Flight: #0685 Support
Requestor: Thomas

Area(s) Covered: Western Alaska

SENSOR DATA

Accession No:	02909	02910
Sensor ID No:	026	036
Sensor Type:	RC-10	RC-10
Focal Length:	12" 304.97mm	6" 153.19mm
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402
Filtration:	Wratten 12	Wratten 12 + 2.2AV
Spectral Band:	510-900nm	510-700nm
f Stop:	8	8
Shutter Speed:	1/250	1/350
No. of Frames:	165	89
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

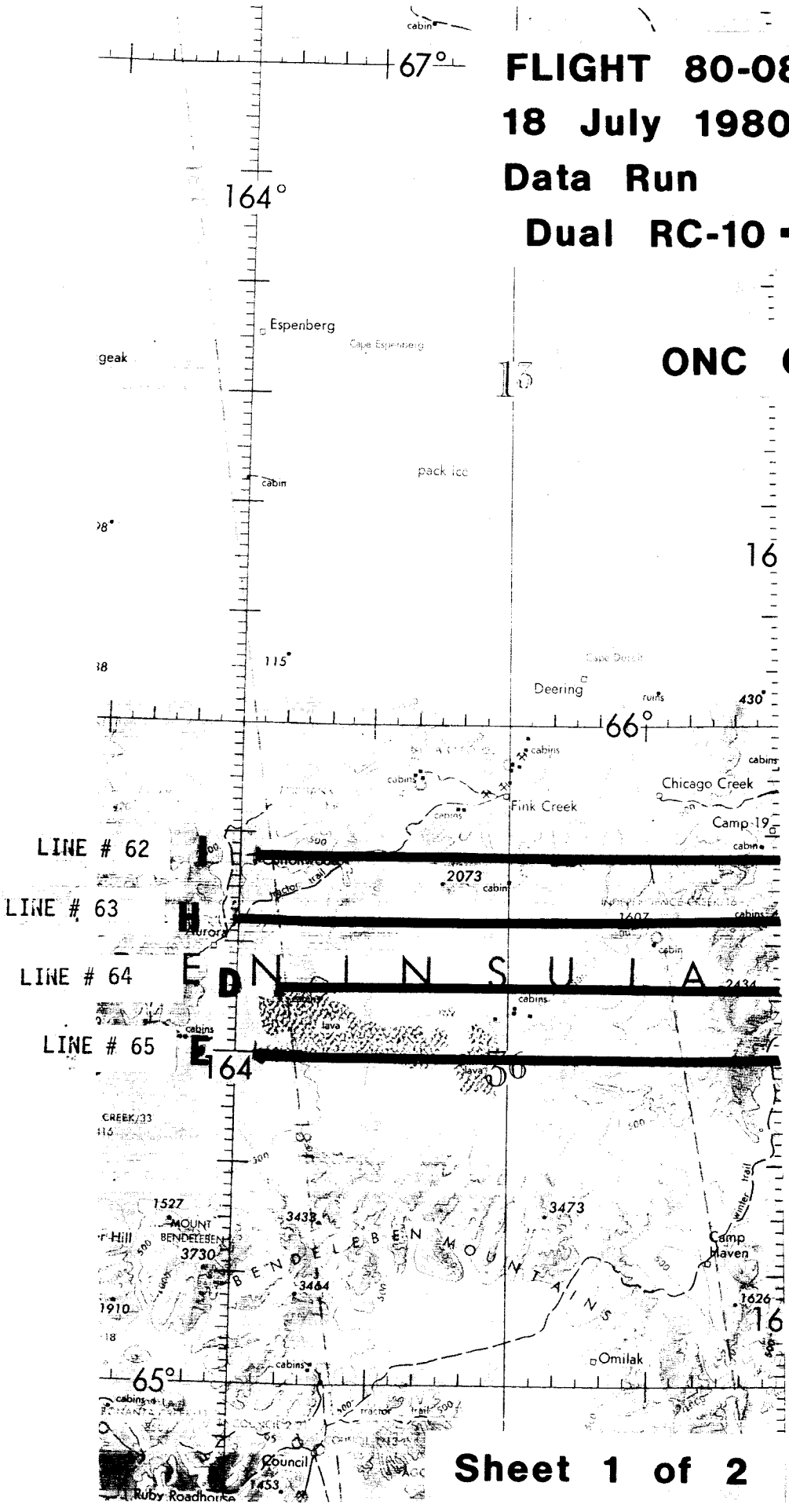
80-089

This flight was flown in support of Flight Request #0685 (Thomas, BLM/ Alaska State Office) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Dual RC-10 coverage was obtained over a portion of western Alaska, southeast of Kotzebne Sound (see Track Map).

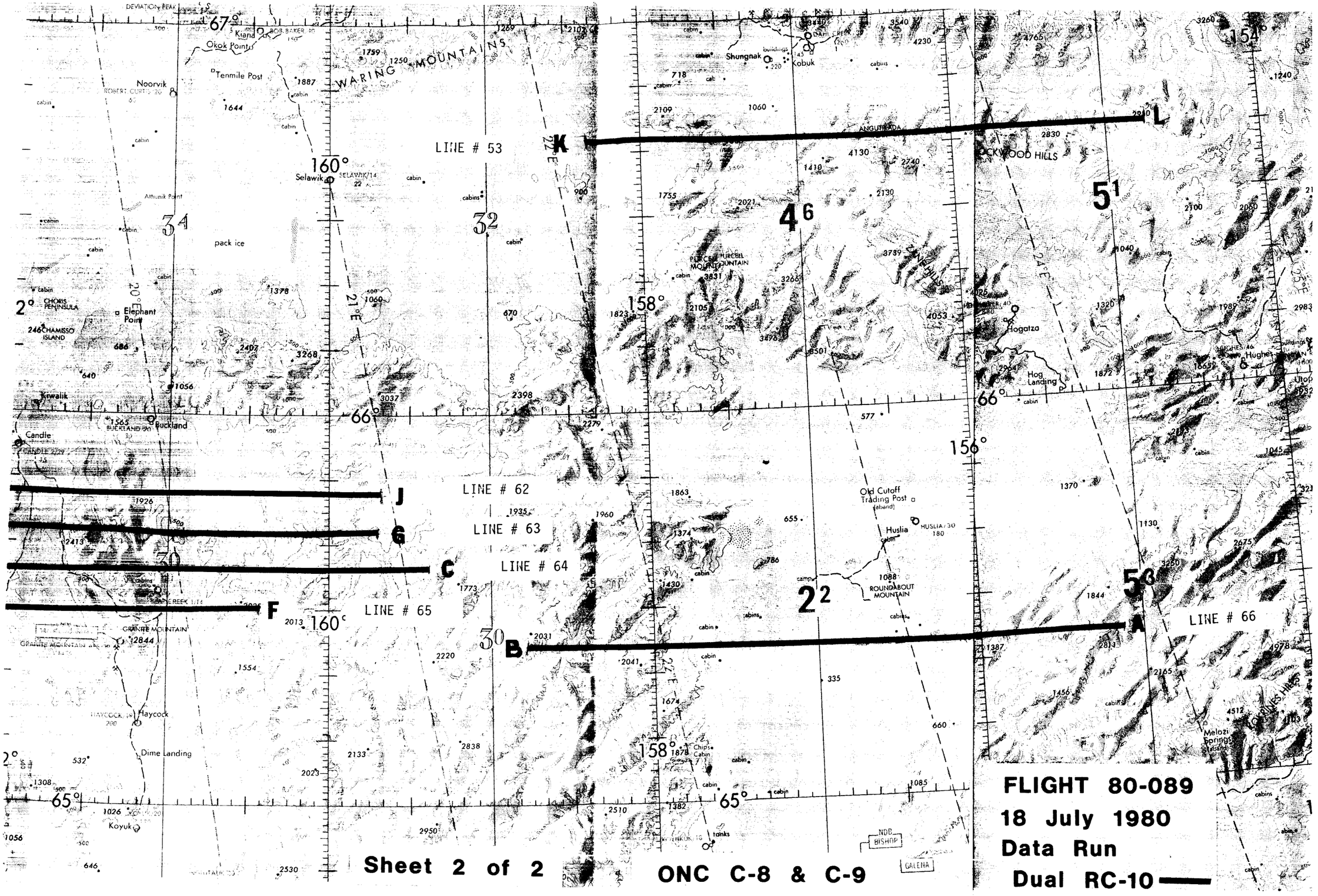
Minor cumulus cloudcover was encountered on all flight lines. No processing or camera malfunctions were noted and the quality of the data is rated excellent.

FLIGHT 80-089
18 July 1980
Data Run
Dual RC-10

ONC C-8



Sheet 1 of 2



Sheet 2 of 2

ONC C-8 & C-9

FLIGHT 80-089
18 July 1980
Data Run
Dual RC-10

FLIGHT SUMMARY REPORT

Flight No: 80-090 **Date:** 17 July 1980

FSR No: 1433 **Julian Date:** 199

Sensor Package: Dual RC-10 **Aircraft No:** 5

Purpose of Flight: #0685 Support
Requestor: Thomas

Area(s) Covered: Alaska

SENSOR DATA

Accession No:	02907	02908
Sensor ID No:	026	036
Sensor Type:	RC-10	RC-10
Focal Length:	12" 304.97mm	6" 153.19mm
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402
Filtration:	Wratten 12	Wratten 12 + 2.2AV
Spectral Band:	510-900nm	510-700nm
f Stop:	8	8
Shutter Speed:	1/250	1/350
No. of Frames:	255	140
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-090

This flight was flown in support of Flight Request #0685 (Thomas, BLM/ Alaska State Office) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over several areas of Alaska (see Track Map).

Minor cumulus and cirrus clouds were encountered over all flight lines. The quality of the photography is excellent with no camera or processing malfunctions noted.

ONC C-8

ONC C-9

LINE 119

LINE 120

LINE 121

LINE 122

LINE 130

LINE 131

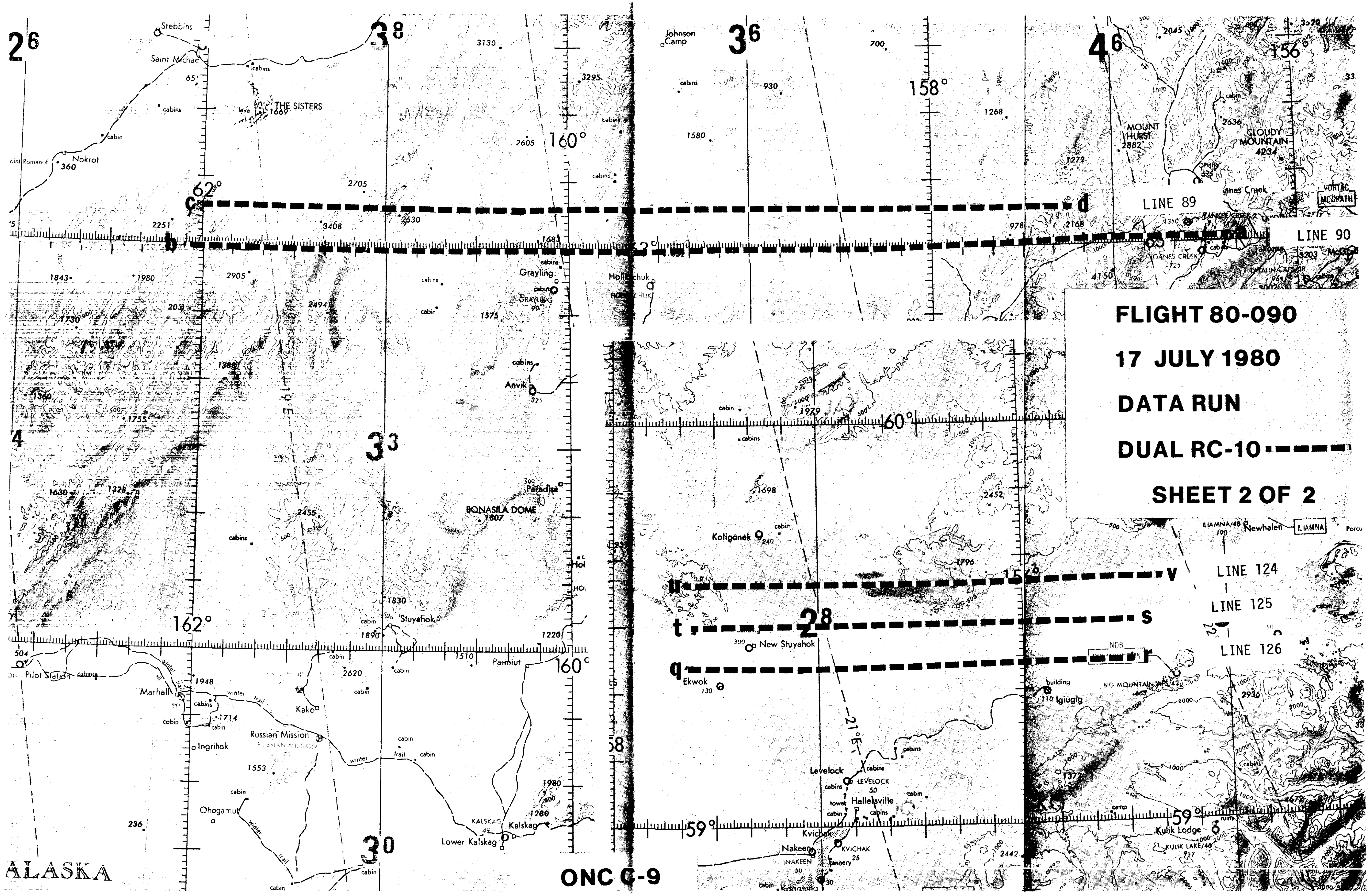
FLIGHT 80-090

17 JULY 1980

DATA RUN

DUAL RC-10 - - - -

SHEET 1 OF 2



FLIGHT 80-090
17 JULY 1980
DATA RUN
DUAL RC-10
SHEET 2 OF 2
LINE 89
LINE 90
LINE 124
LINE 125
LINE 126
ONC C-9
ALASKA
Stebbins
Saint Michael
THE SISTERS
Nokrot
Grayling
Holikachuk
Anvik
BONASILA DOME
Paradise
Stuyahok
Pilot Station
Marshall
Kako
Russian Mission
Ingrihak
Ohogamut
Lower Kalskag
Kalskag
Johnson Camp
MOUNT HURST
CLOUDY MOUNTAIN
Koliganek
New Stuyahok
Ekwok
Igiugig
Newhalen
Levelock
Hallersville
Kvichak
Naknek
Kulik Lodge

FLIGHT SUMMARY REPORT

Flight No: 80-091

Date: 19 July 1980

FSR No: 1434

Julian Date: 201

Sensor Package: Dual RC-10

Aircraft No: 5

Purpose of Flight: #0685 Support
Requestor: Thomas

Area(s) Covered: Alaska

SENSOR DATA

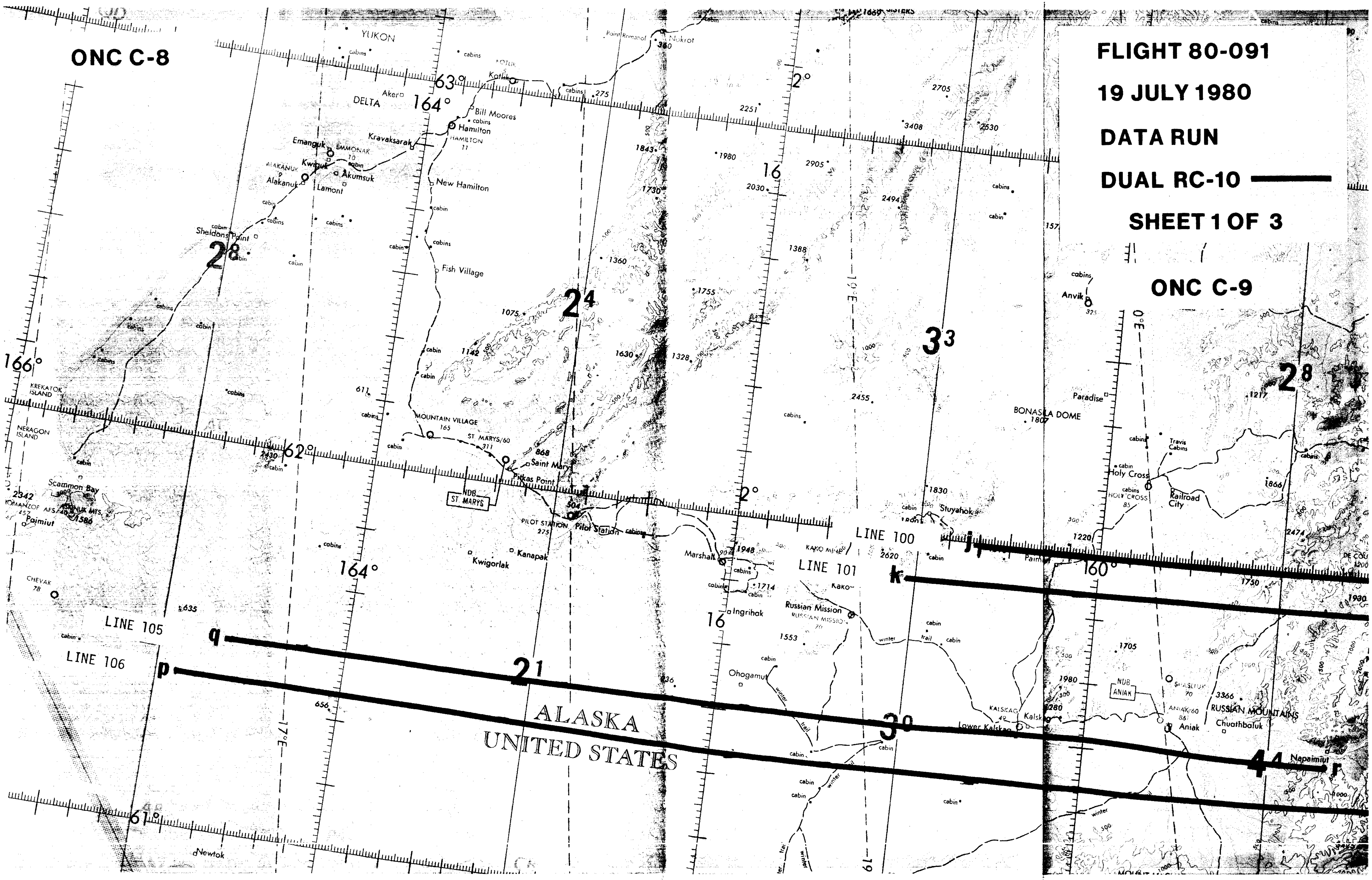
Accession No:	02911	02912
Sensor ID No:	026	036
Sensor Type:	RC-10	RC-10
Focal Length:	12" 304.97mm	6" 153.19mm
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402
Filtration:	Wratten 12	Wratten 12 + 2.2AV
Spectral Band:	510-900nm	510-700nm
f Stop:	8	8
Shutter Speed:	1/250	1/400
No. of Frames:	423	218
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

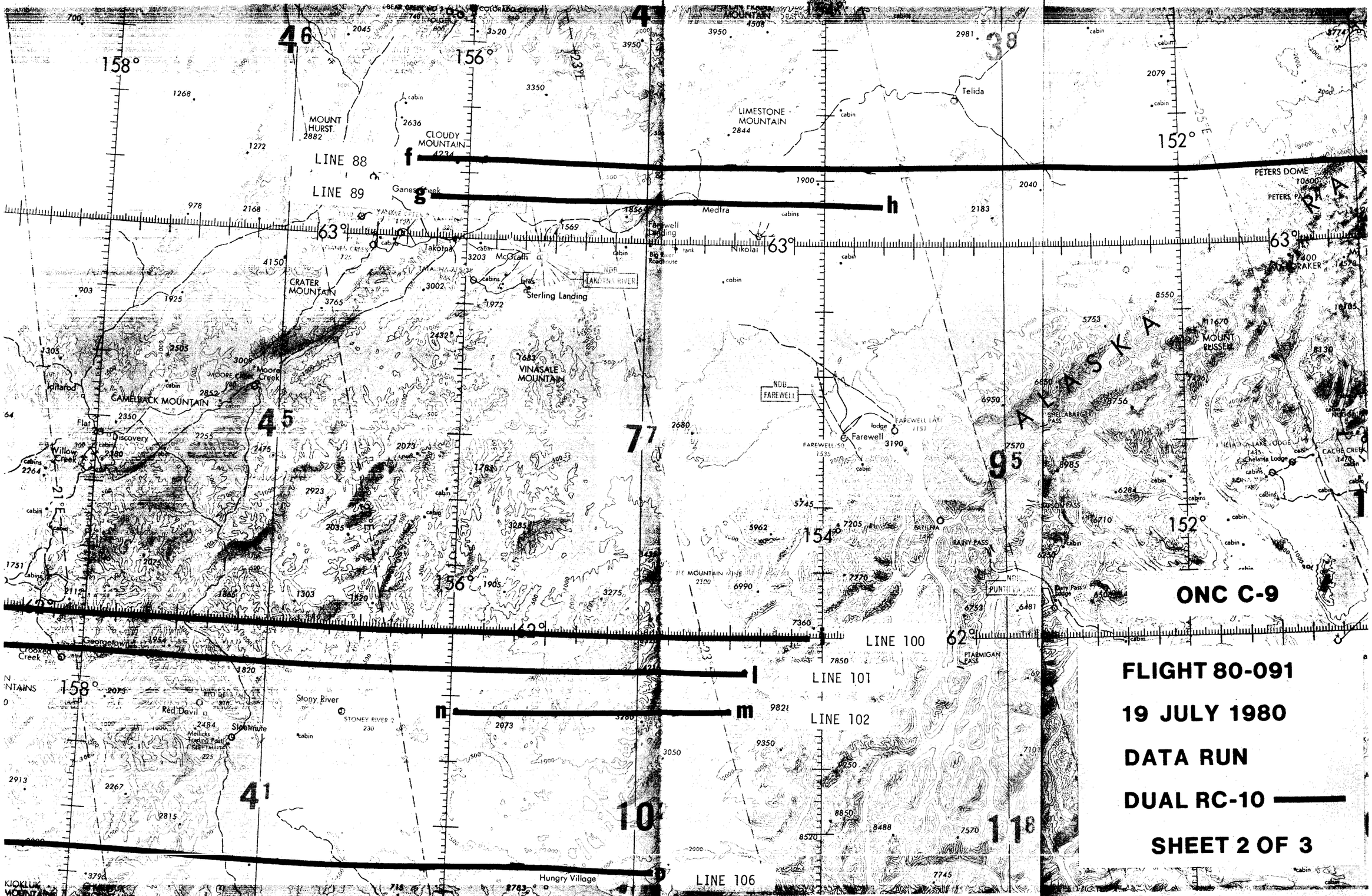
FLIGHT SUMMARY

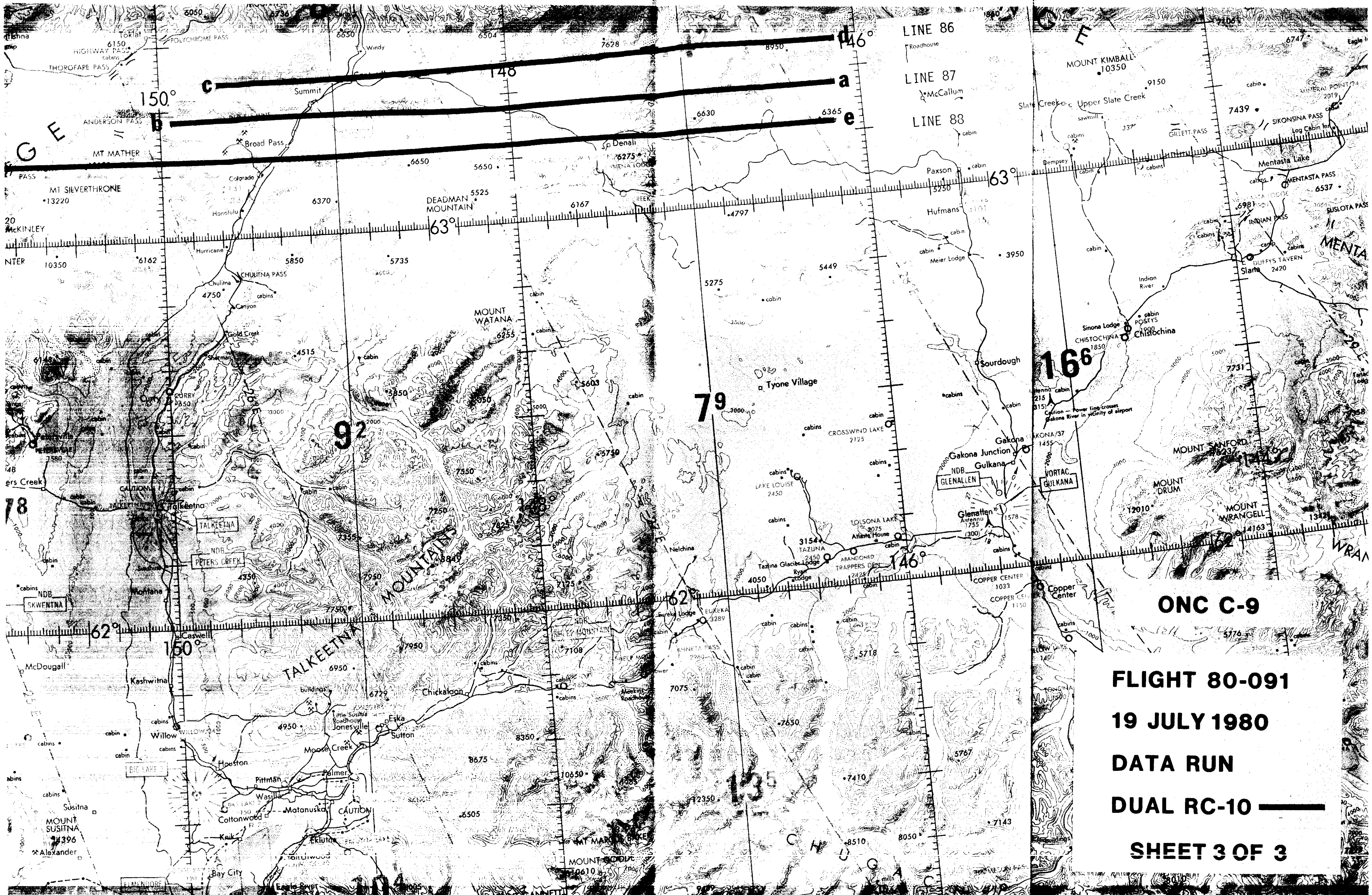
80-091

This flight was flown in support of Flight Request #0685 (Thomas, BLM/ Alaska) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over several areas within Alaska (see Track Maps).

Cirrus and cumulus clouds were encountered over all data lines. The photography acquired is of excellent quality with no camera or processing malfunctions noted.


ONC C-8
FLIGHT 80-091
19 JULY 1980
DATA RUN
DUAL RC-10
SHEET 1 OF 3
ONC C-9
LINE 100
LINE 101
LINE 105
LINE 106
ALASKA
UNITED STATES
YUKON
DELTA
63°
164°
166°
62°
61°
160°
Kotlik
Bill Moores
Hamilton
Kravaksarak
Emanguk
Kwiguk
Alakanuk
Akumsuk
Lamont
New Hamilton
Sheldons Point
Fish Village
MOUNTAIN VILLAGE
ST MARYS
Saint Marys
Pitkas Point
Pilot Station
Kwigorlak
Kanapak
Marshall
Ingrihak
Russian Mission
Ohogamut
Lower Kalskag
Kalskag
Aniak
Chuathbaluk
Napaimiut
RUSSIAN MOUNTAINS
Holy Cross
Railroad City
Travis Cabins
Paradise
BONASILA DOME
Anvik
Stuyahok
Kako
Paimiut
KREKATOK ISLAND
NERAGON ISLAND
Scammon Bay
Poimiut
CHEVAK
Newtok
Point Romanof
Nokrot


LINE 88
LINE 89
LINE 100
LINE 101
LINE 102
LINE 106
f
g
h
l
m
n
o
MOUNT HURST 2882
CLOUDY MOUNTAIN 4234
LIMESTONE MOUNTAIN 2844
Telida
Ganes Creek
Takotna
McGrath
Sterling Landing
Medfra
Farewell Landing
Nikolai
CRATER MOUNTAIN
VINASALE MOUNTAIN
CAMELBACK MOUNTAIN
Moore Creek
Farewell
FAREWELL
PETERS DOME
MOUNT RUSSELL
ALASKA RANGE
Georgetown
Red Devil
Stony River
Sleetmute
Hungry Village
KIOKLUK MOUNTAINS
ONC C-9
FLIGHT 80-091
19 JULY 1980
DATA RUN
DUAL RC-10
SHEET 2 OF 3


LINE 86
LINE 87
LINE 88
a
b
c
d
e
ONC C-9
FLIGHT 80-091
19 JULY 1980
DATA RUN
DUAL RC-10
SHEET 3 OF 3
150°
148
146°
63°
62°
MT MATHER
MT SILVERTHRONE
13220
McKINLEY
DEADMAN MOUNTAIN
MOUNT WATANA
MOUNT KIMBALL 10350
Broad Pass
Summit
Denali
Paxson
Hufmans
Meier Lodge
Sourdough
Gakona
Gakona Junction
Gulkana
Glennallen
NDB GLENALLEN
VORTAC GULKANA
Copper Center
Chistochina
Slana
Mentasta Lake
MENTASTA PASS
MOUNT SANFORD
MOUNT DRUM
MOUNT WRANGELL
Tyone Village
CROSSWIND LAKE
LAKE LOUISE
TOLSONA LAKE
Nelchina
Eureka Lodge
Chickaloon
Sutton
Palmer
Wasilla
Houston
Willow
Kashwitna
Talkeetna
TALKEETNA
NDB PETERS CREEK
NDB SKWENTNA
McDougall
MOUNT SUSITNA
Susitna
Cottonwood
Knik
Eklutna
Eagle River
Bay City
Matanuska
TALKEETNA MOUNTAINS
Chulitna
CHULITNA PASS
Gold Creek
Curry
Colorado
Honolulu
Hurricane
Canyon
Sherman
Caswell
Jonesville
Moose Creek
Pittman
Caution — Power line crosses Gakona River in vicinity of airport

FLIGHT SUMMARY REPORT

Flight No: 80-092

Date: 20 July 1980

FSR No: 1435

Julian Date: 202

Sensor Package: Dual RC-10

Aircraft No: 5

Purpose of Flight: #0685 Support
Requestor: Thomas

Area(s) Covered: Alaska

SENSOR DATA

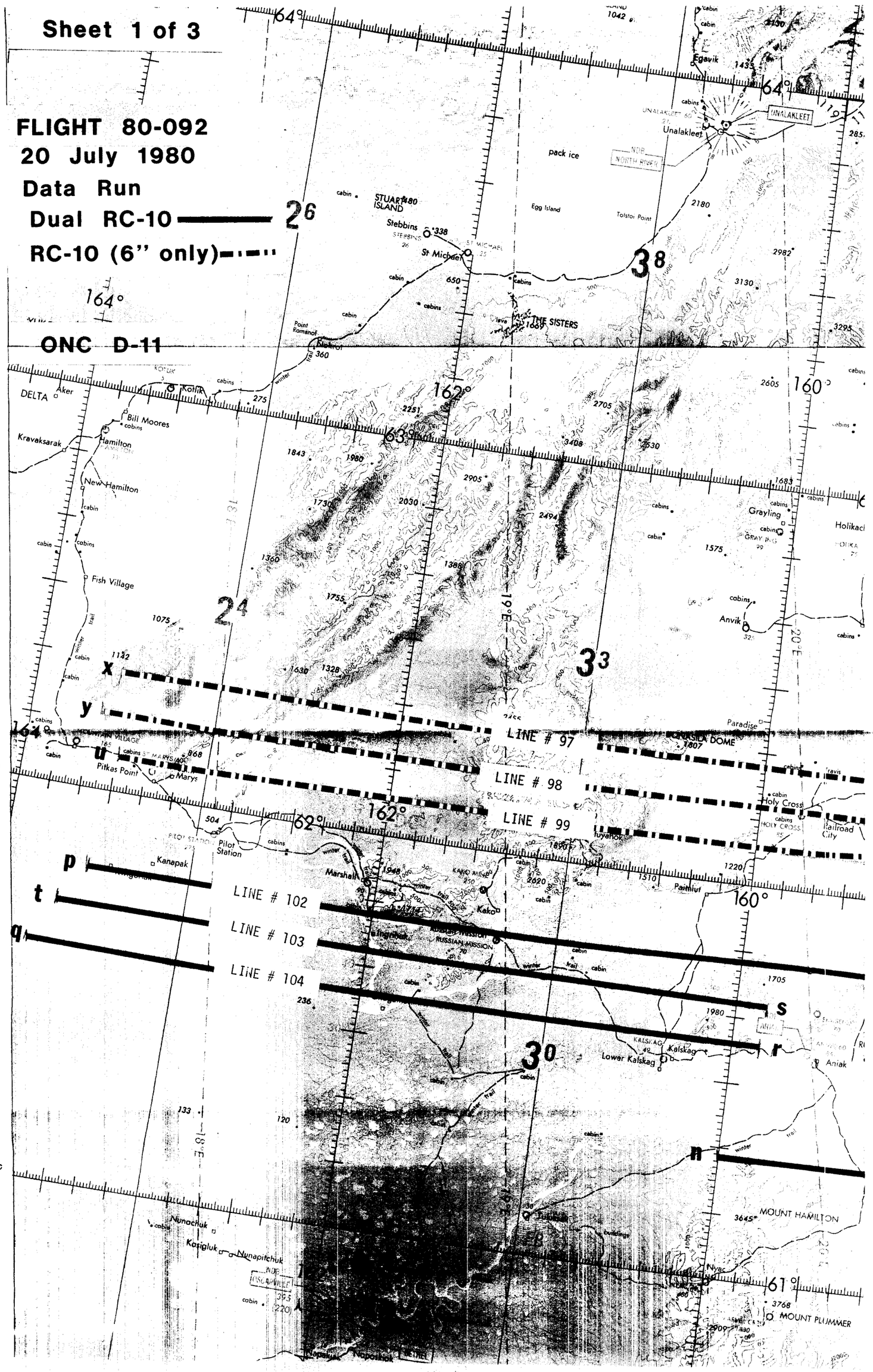
Accession No:	02913	02914
Sensor ID No:	026	036
Sensor Type:	RC-10	RC-10
Focal Length:	12" 304.97mm	6" 153.19mm
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402
Filtration:	Wratten 12	Wratten 12 + 2.2AV
Spectral Band:	510-900nm	510-700nm
f Stop:	8	8
Shutter Speed:	1/250	1/400
No. of Frames:	318	219
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	Intervalometer malfunction	---

FLIGHT SUMMARY

80-092

This flight was flown in support of Flight Request #0685 (Thomas, BLM/ Alaska State Office) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Dual RC-10 coverage was obtained over western Alaska (see Track Map).

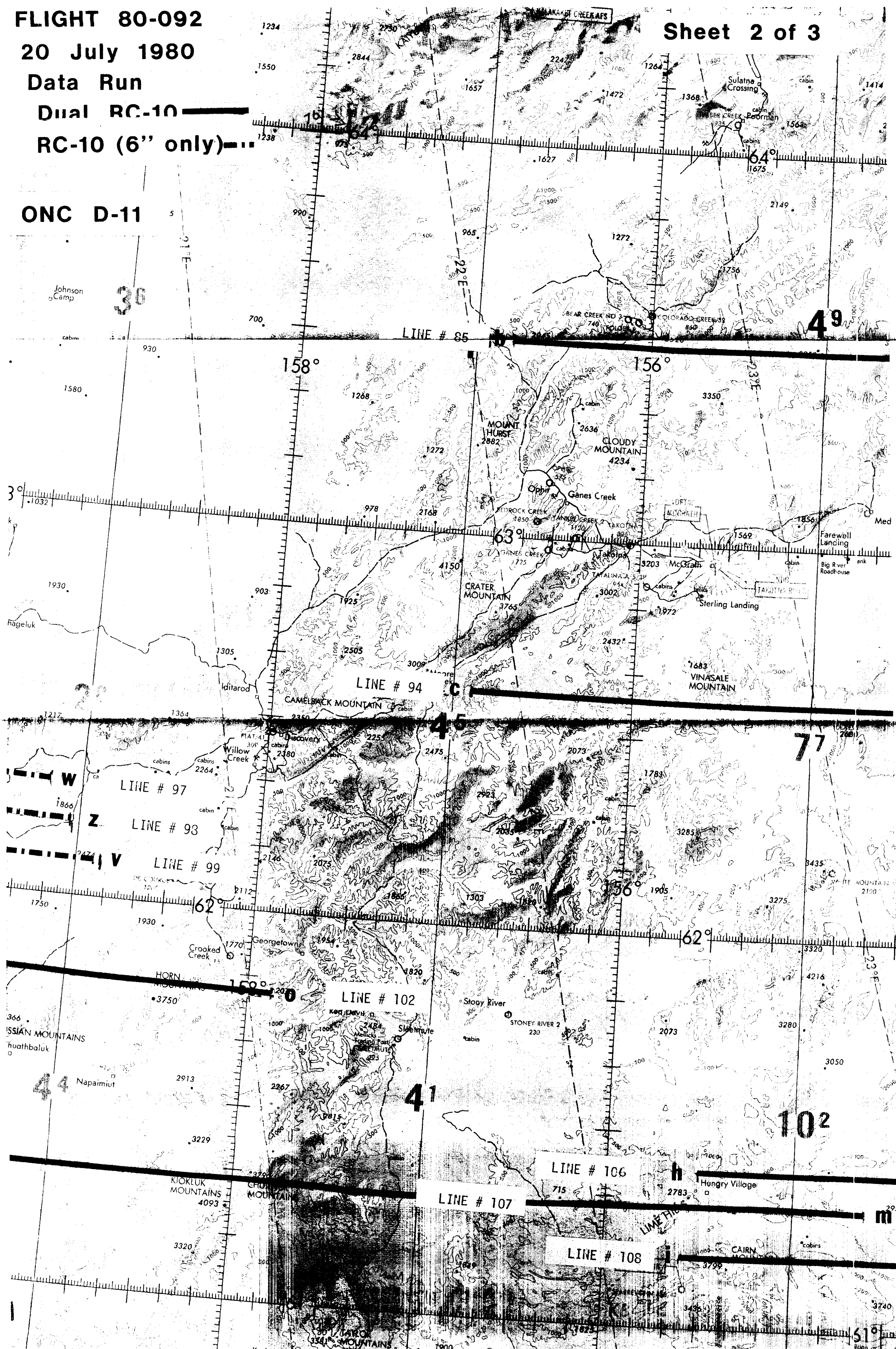
Those areas flown were essentially cloud-free with minor cumulus and cirrus encountered on some flight lines. An intervelometer failure during the flight resulted in the loss of color infrared coverage on the last three flight lines (lines 97, 98, & 99). No other camera or processing malfunctions were noted and the quality of the data is rated excellent.

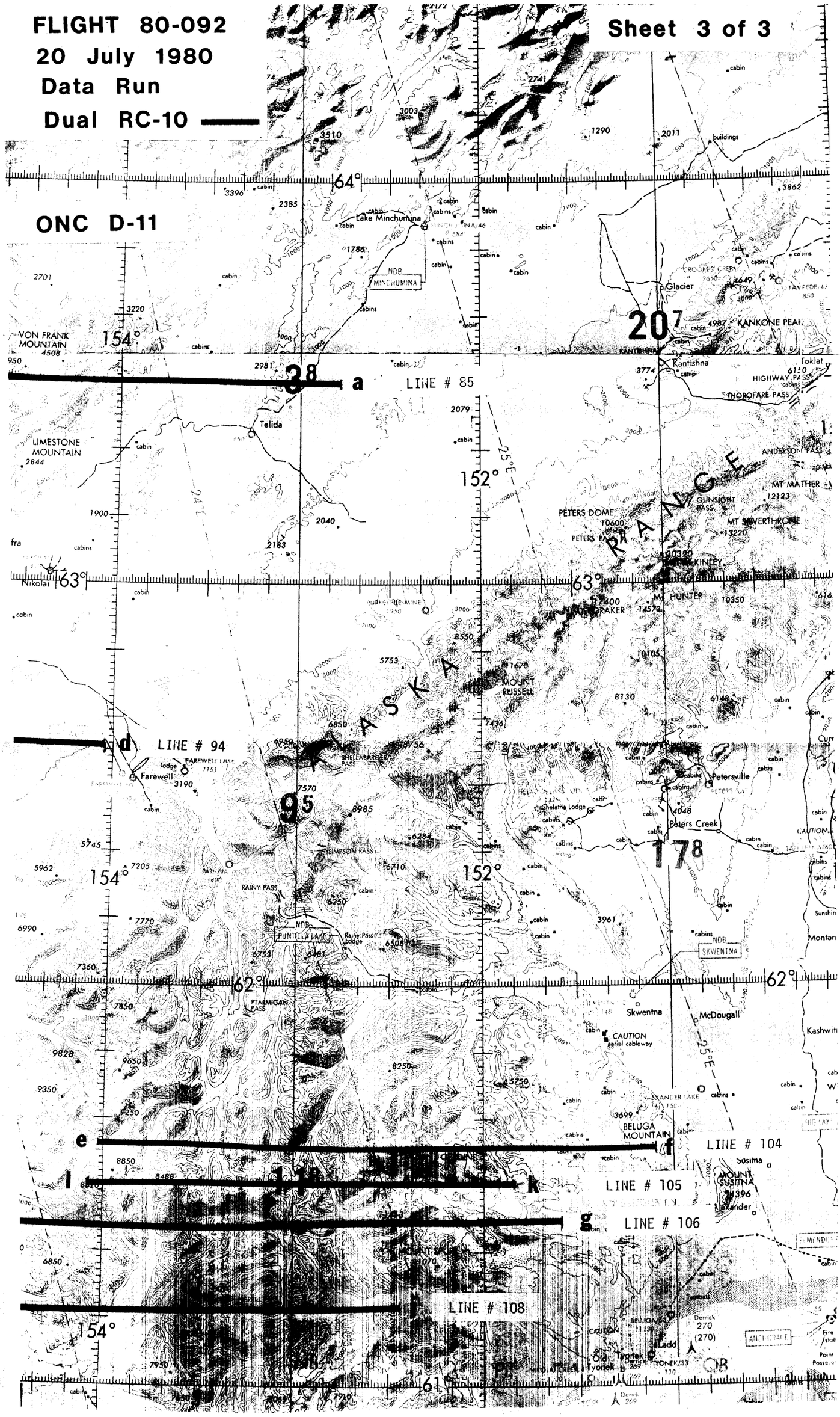

Sheet 1 of 3
FLIGHT 80-092
20 July 1980
Data Run
Dual RC-10
RC-10 (6" only)
ONC D-11
LINE # 97
LINE # 98
LINE # 99
LINE # 102
LINE # 103
LINE # 104
26
38
24
33
30
64°
63°
62°
61°
160°
162°
164°
Egavik
Unalakleet
pack ice
Egg Island
Tolstoi Point
Stebbins
St Michael
STUART ISLAND
THE SISTERS
Point Romanof
Kotlik
DELTA
Bill Moores
Kraveksarak
Hamilton
New Hamilton
Fish Village
Grayling
Holikaci
Anvik
Paradise
Holy Cross
Railroad City
Pilot Station
Kanepak
Marshall
Kako
Paimiut
Lower Kalskag
Kalskag
Aniak
Nunachuk
Kasigluk
Nunapitchuk
MOUNT HAMILTON
MOUNT PLUMMER
Nyac

FLIGHT 80-092
20 July 1980
Data Run
Dual RC-10
RC-10 (6" only)

ONC D-11

Sheet 2 of 3




FLIGHT 80-092
20 July 1980
Data Run
Dual RC-10
Sheet 3 of 3
ONC D-11
LINE # 85
LINE # 94
LINE # 104
LINE # 105
LINE # 106
LINE # 108
ALASKA RANGE
Lake Minchumina
Glacier
KANKONE PEAK
Kantishna
Toklat
THOROFARE PASS
ANDERSON PASS
MT MATHER
GUNSIGHT PASS
PETERS DOME
MT SILVERTHRONE
MT HUNTER
MOUNT RUSSELL
Telida
LIMESTONE MOUNTAIN
VON FRANK MOUNTAIN
Nikolai
Farewell
Petersville
Peters Creek
Skwentna
McDougall
BELUGA MOUNTAIN
MOUNT SUSITNA
Susitna
Alexander
Tyonek
Ladd
Derrick
ANCHORAGE
SHELLABARGER PASS
SIMPSON PASS
RAINY PASS
PTARMIGAN PASS
SKANEE LAKE
CAUTION aerial cableway
NDB MINCHUMINA
NDB PUNTILLA LAKE
NDB SKWENTNA
154°
152°
64°
63°
62°
61°

FLIGHT SUMMARY REPORT

Flight No: 80-094

Date: 23 July 1980

FSR No: 1436

Julian Date: 205

Sensor Package: Dual RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0685 Support
Requestor: Thomas
#0047 Support
Requestor: Ferry

Area(s) Covered: Alaska

SENSOR DATA

Accession No:	02917	02918	---
Sensor ID No:	026	036	024
Sensor Type:	RC-10	RC-10	APS
Focal Length:	12" 304.97mm	6" 153.19mm	---
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402	---
Filtration:	Wratten 12	Wratten 12 + 2.2AV	---
Spectral Band:	510-900nm	510-700nm	---
f Stop:	8	8	---
Shutter Speed:	1/250	1/400	---
No. of Frames:	416	217	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

FLIGHT SUMMARY

80-094

This flight was flown in support of Flight Requests #0685 (Thomas, BLM/ Alaska State Office) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photographic data was collected over western and central Alaska with the dual RC-10 configuration (see Track Map). Additionally, Aerosol Particulate Sampler (APS) data was collected at stepped altitudes during climb-out, but is not depicted on the track map.

Minor to scattered cumulus and strato cumulus was encountered throughout the flight. No processing or camera malfunctions were noted and the quality of the data is rated excellent.

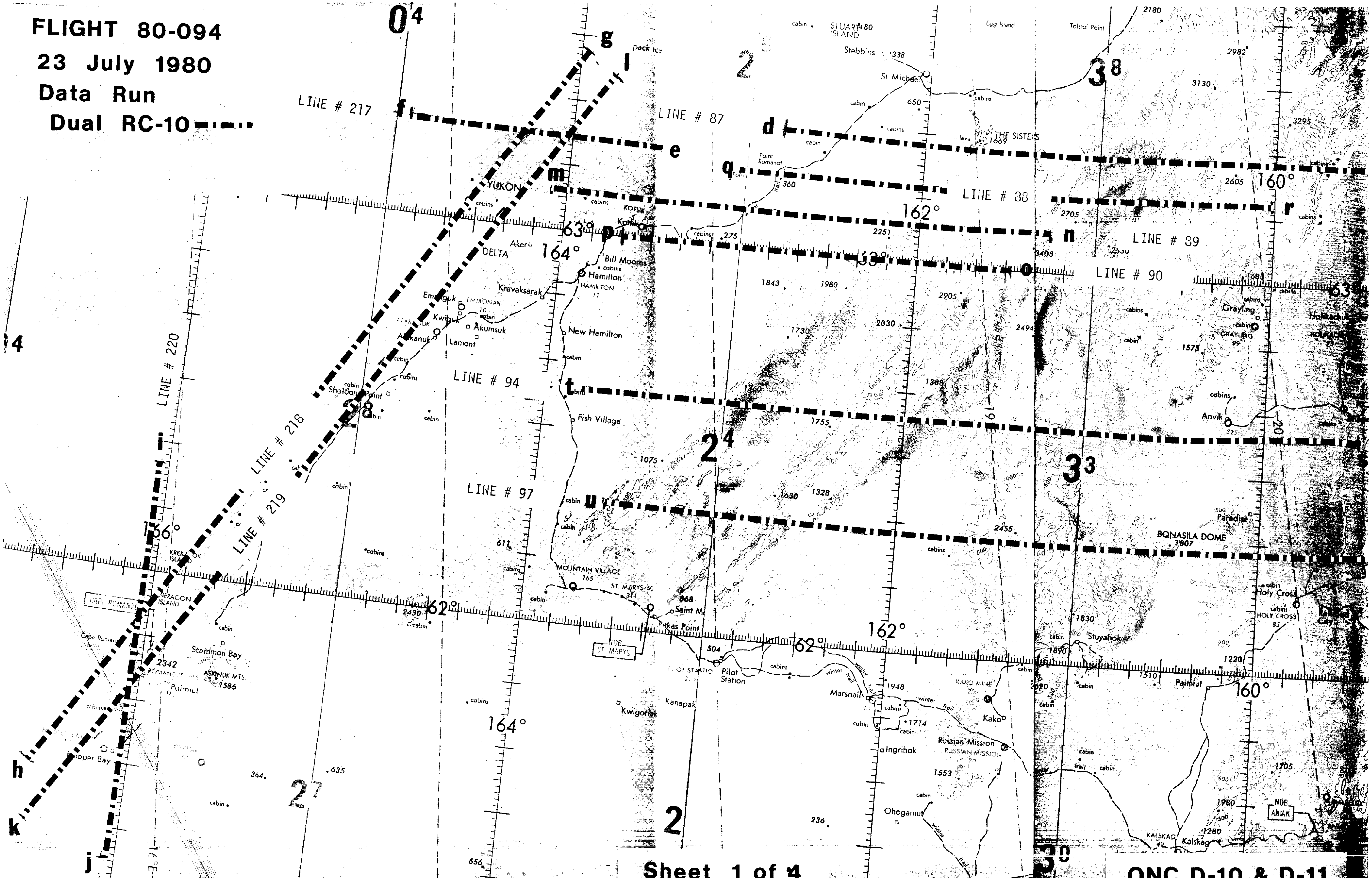
The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.

FLIGHT 80-094

23 July 1980

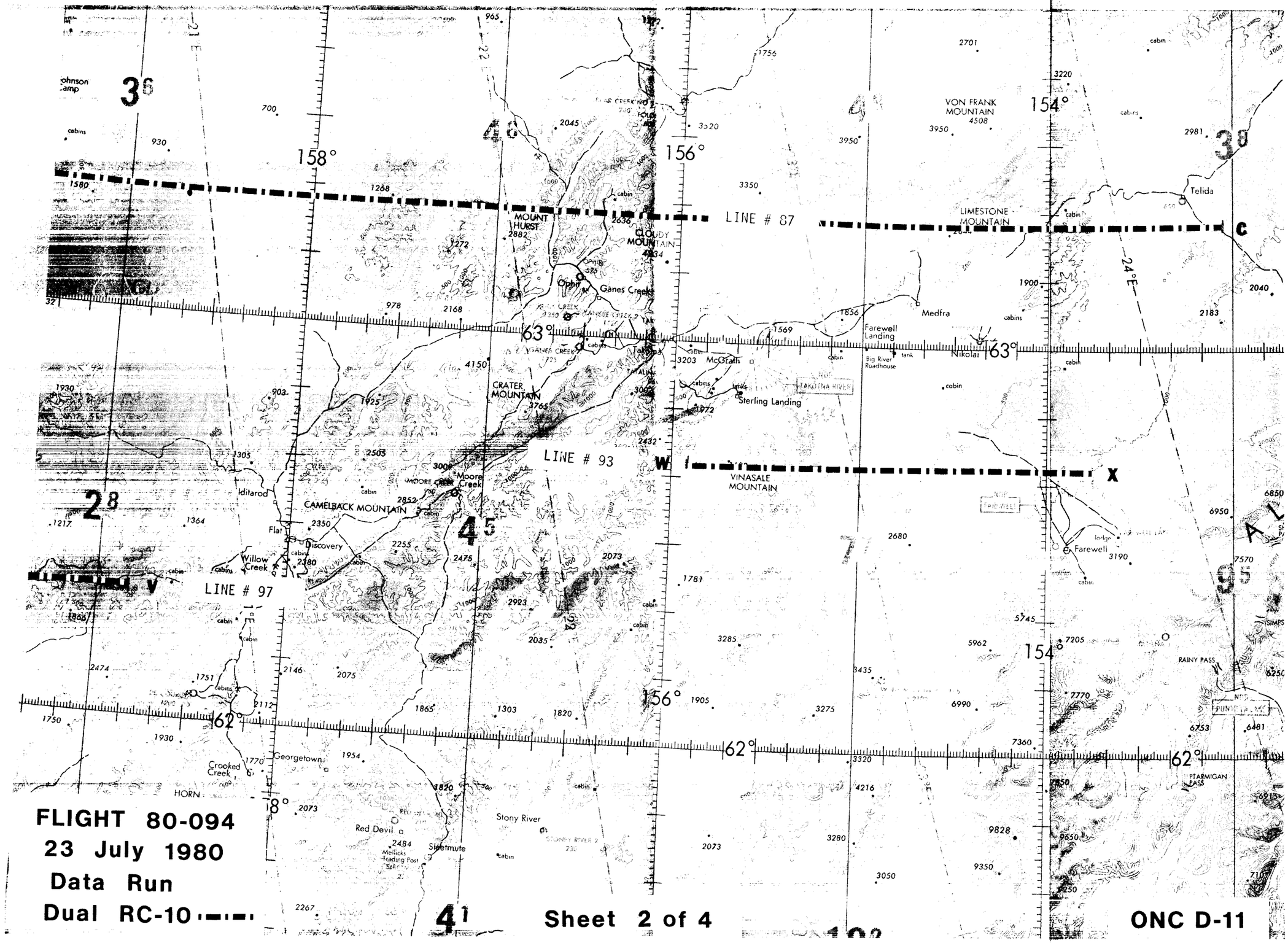
Data Run

Dual RC-10



Sheet 1 of 4

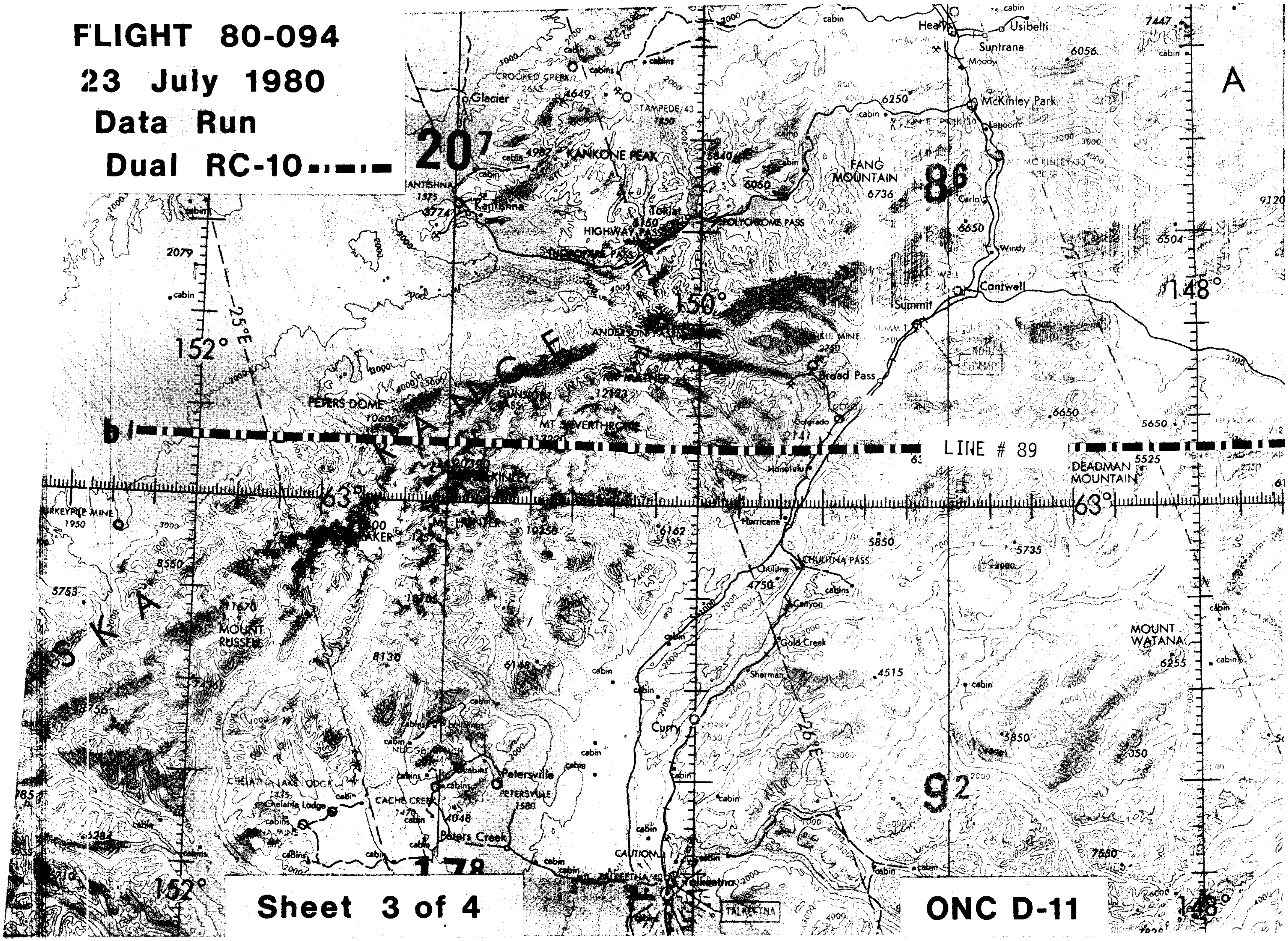
ONC D-10 & D-11



FLIGHT 80-094
23 July 1980
Data Run
Dual RC-10

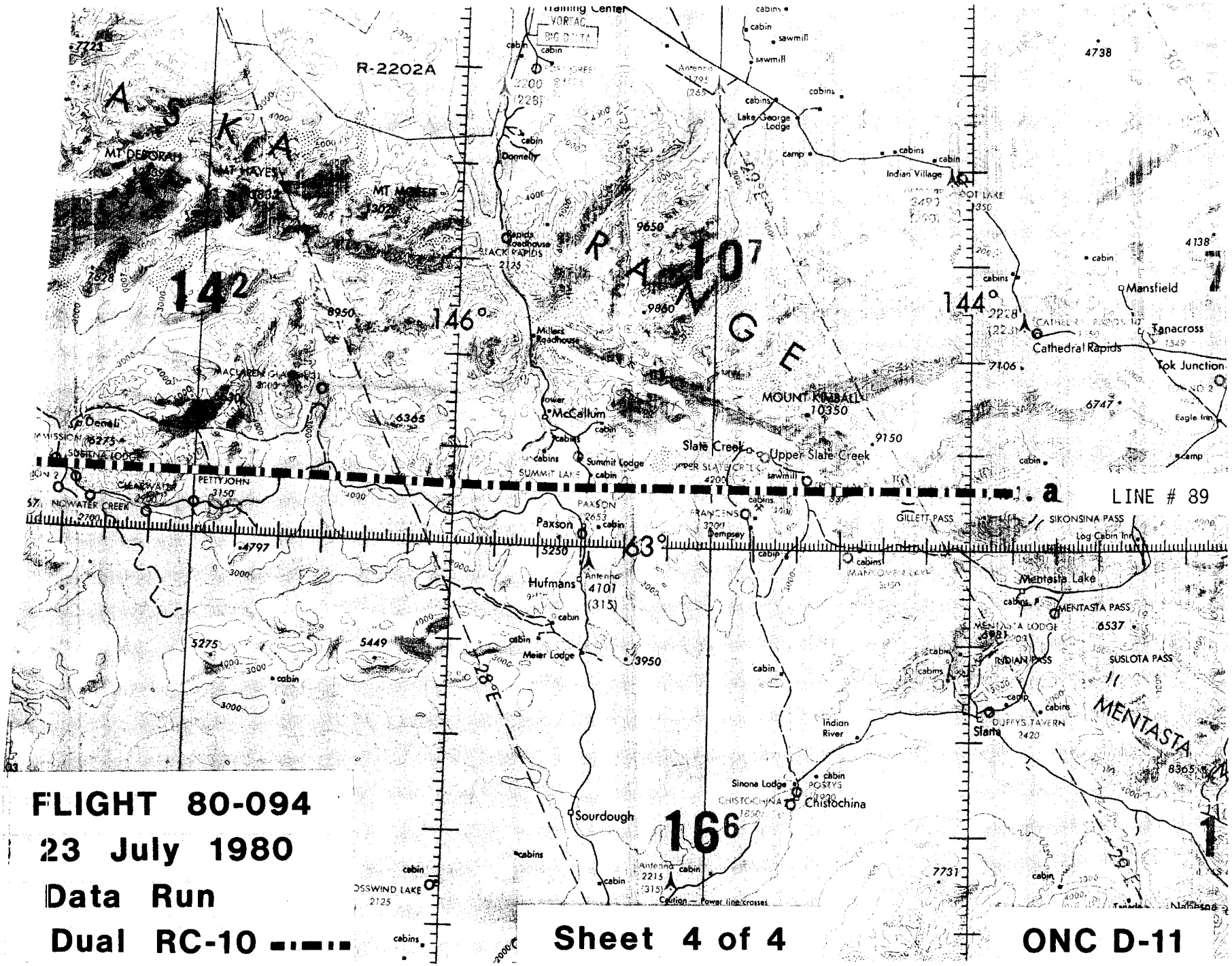
ONC D-11

FLIGHT 80-094
23 July 1980
Data Run
Dual RC-10



Sheet 3 of 4

ONC D-11



FLIGHT 80-094

23 July 1980

Data Run

Dual RC-10

Sheet 4 of 4

ONC D-11

FLIGHT SUMMARY REPORT

Flight No: 80-095

Date: 24 July 1980

FSR No: 1437

Julian Date: 266

Sensor Package: Dual RC-10

Aircraft No: 5

Purpose of Flight: #0685 Support
Requestor: Thomas

Area(s) Covered: Alaska

SENSOR DATA

Accession No:	02919	02920
Sensor ID No:	026	036
Sensor Type:	RC-10	RC-10
Focal Length:	12" 304.97mm	6" 153.19mm
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402
Filtration:	Wratten 12	Wratten 12 + 2.2AV
Spectral Band:	510-900nm	510-700nm
f Stop:	8	8
Shutter Speed:	1/250	1/400
No. of Frames:	318	163
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-095

This flight was flown in support of Flight Request #0685 (Thomas, BLM/ Alaska State Office) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over several areas of Alaska (see Track Map).

Minor cirrus and cumulus clouds were encountered over all flight lines. The photography acquired is excellent quality with no camera or processing malfunctions noted.

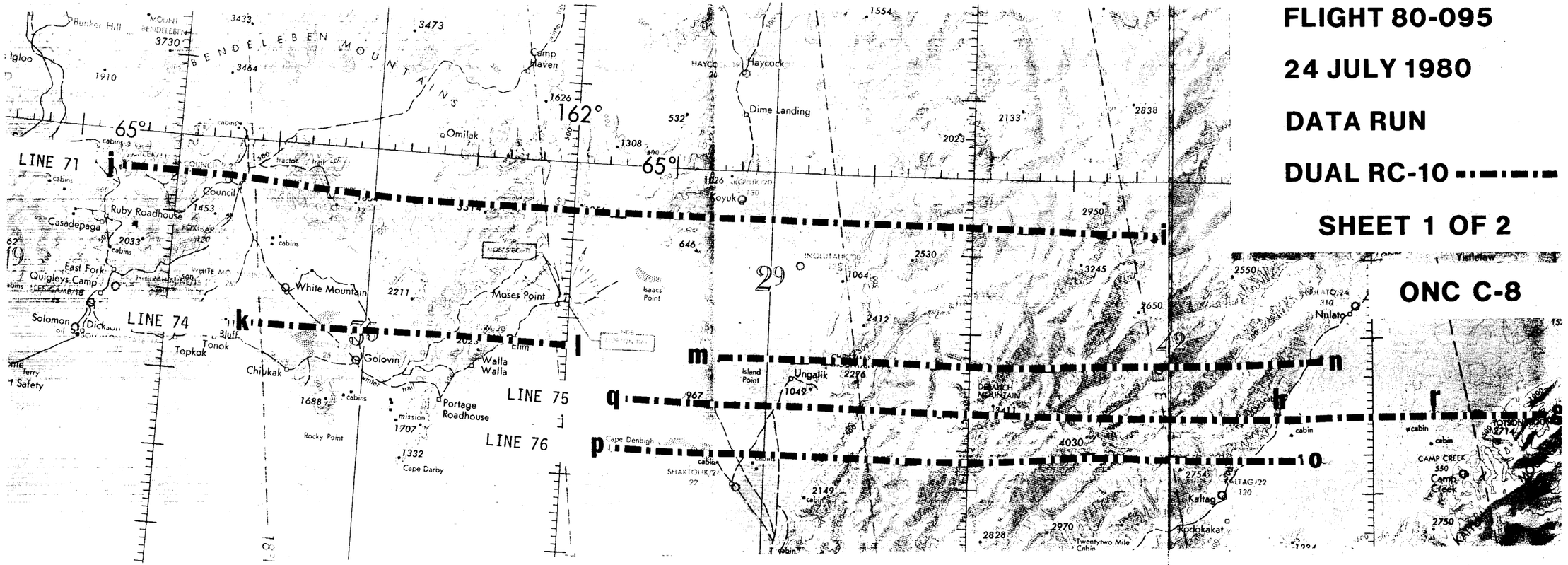
FLIGHT 80-095

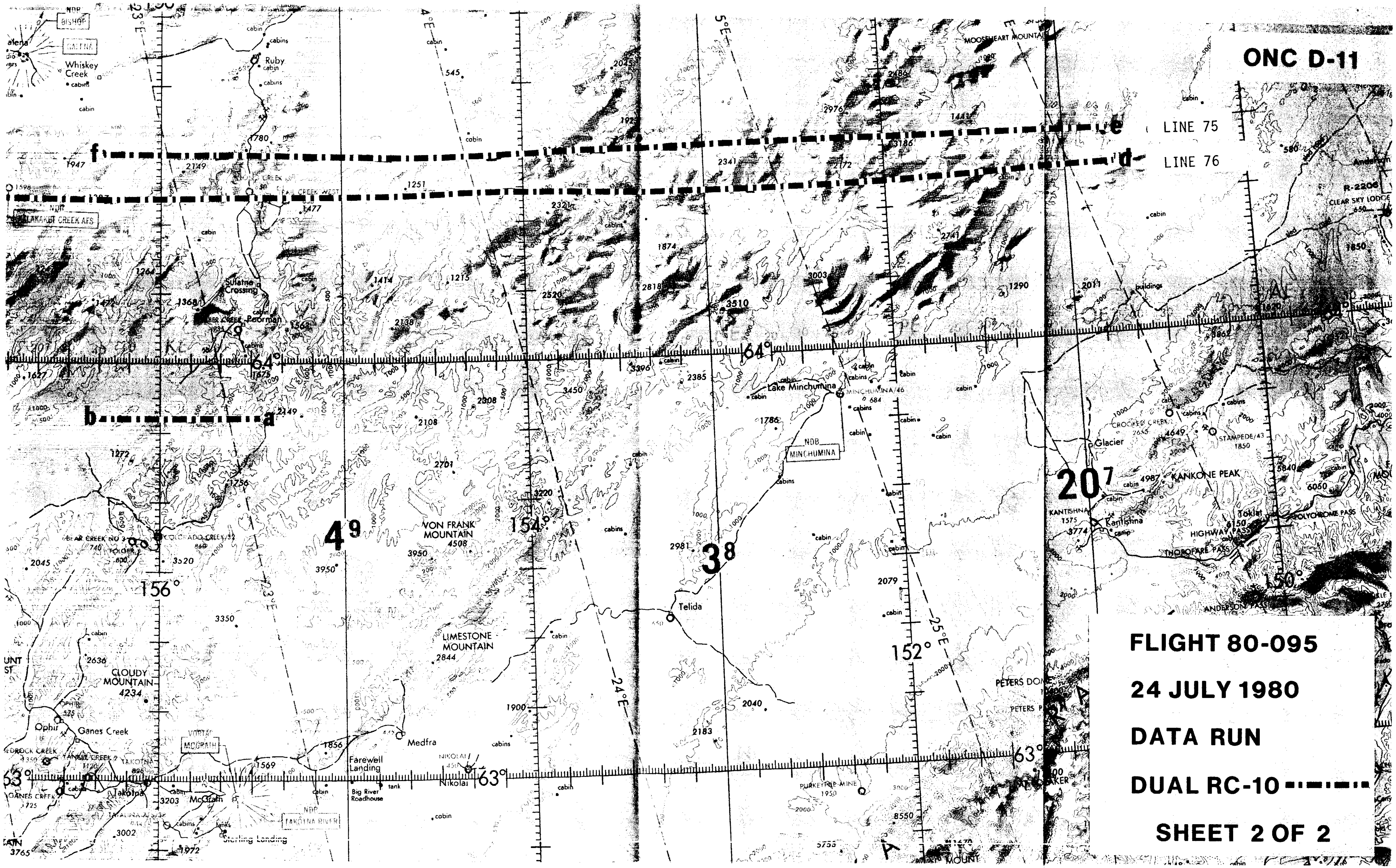
24 JULY 1980

DATA RUN

DUAL RC-10 ·-·-·-·

SHEET 1 OF 2




ONC D-11
LINE 75
LINE 76
FLIGHT 80-095
24 JULY 1980
DATA RUN
DUAL RC-10
SHEET 2 OF 2
Ruby
Whiskey Creek
Sulatna Crossing
Poorman
Lake Minchumina
MINCHUMINA
VON FRANK MOUNTAIN
LIMESTONE MOUNTAIN
CLOUDY MOUNTAIN
Ophir
Ganes Creek
Takotna
McGrath
Medfra
Farewell Landing
Nikolai
Telida
Sterling Landing
Glacier
KANKONE PEAK
Kantishna
CLEAR SKY LODGE
STAMPEDE
MOOSEHEART MOUNTAIN
PETERS DOME
64°
63°
156°
154°
152°
150°

FLIGHT SUMMARY REPORT

Flight No: 80-098

Date: 30 July 1980

FSR No: 1438

Julian Date: 212

Sensor Package: Dual RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0685 Support
Requestor: Thomas
#0047 Support
Requestor: Ferry

Area(s) Covered: Alaska

SENSOR DATA

Accession No:	02921	02922	---
Sensor ID No:	026	036	024
Sensor Type:	RC-10	RC-10	APS
Focal Length:	12" 304.97mm	6" 153.19mm	---
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402	---
Filtration:	Wratten 12	Wratten 12 + 2.2AV	---
Spectral Band:	510-900nm	510-700nm	---
f Stop:	8	8	---
Shutter Speed:	1/250	1/400	---
No. of Frames:	357	187	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

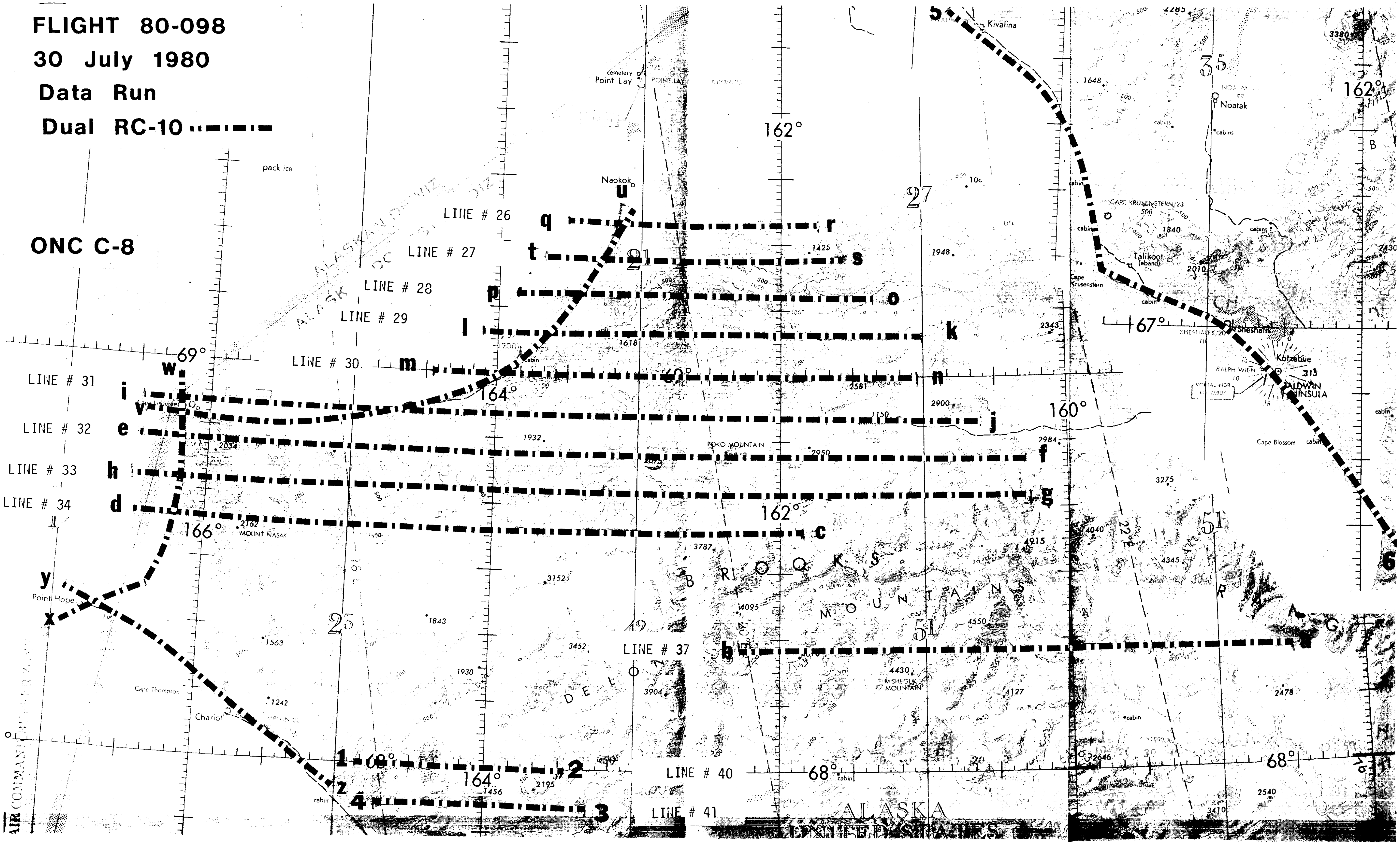
FLIGHT SUMMARY

80-098

This flight was flown in support of Flight Requests #0685 (Thomas, BLM/ Alaska State Office) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Dual RC-10 photographic coverage was obtained over northwestern Alaska (see Track Map). Additionally, Aerosol Particulate Sampler (APS) data was collected for the full time at altitude. Because of the extensive area of coverage no track map is provided for the APS data.

The area photographed was virtually cloud-free. No processing or camera malfunctions were noted and the quality of the data is rated excellent. In addition to those flight lines flown, additional coverage was obtained along the coastline from Naokok to Baldwin Peninsula (see Track Map).

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



FLIGHT 80-098
30 July 1980
Data Run
Dual RC-10
ONC C-8
LINE # 26
LINE # 27
LINE # 28
LINE # 29
LINE # 30
LINE # 31
LINE # 32
LINE # 33
LINE # 34
LINE # 37
LINE # 40
LINE # 41
Point Lay
Naokok
Kivalina
Noatak
Kotzebue
Point Hope
Cape Thompson
Chariot
Cape Krusenstern
POKO MOUNTAIN
MOUNT NASAK
MISHEGUK MOUNTAIN
Cape Blossom
pack ice
BROOKS MOUNTAINS
DE LONG
ALASKA
UNITED STATES

FLIGHT SUMMARY REPORT

Flight No: 80-099

Date: 31 July 1980

FSR No: 1439

Julian Date: 213

Sensor Package: Dual RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0685 Support
Requestor: Thomas
#0047 Support
Requestor: Ferry

Area(s) Covered: Alaska

SENSOR DATA

Accession No:	02923	02924	---
Sensor ID No:	026	036	024
Sensor Type:	RC-10	RC-10	APS
Focal Length:	12" 304.97mm	6" 153.19mm	---
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402	---
Filtration:	Wratten 12	Wratten 12 + 2.2AV	---
Spectral Band:	510-900nm	510-700nm	---
f Stop:	8	8	---
Shutter Speed:	1/250	1/350	---
No. of Frames:	262	143	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

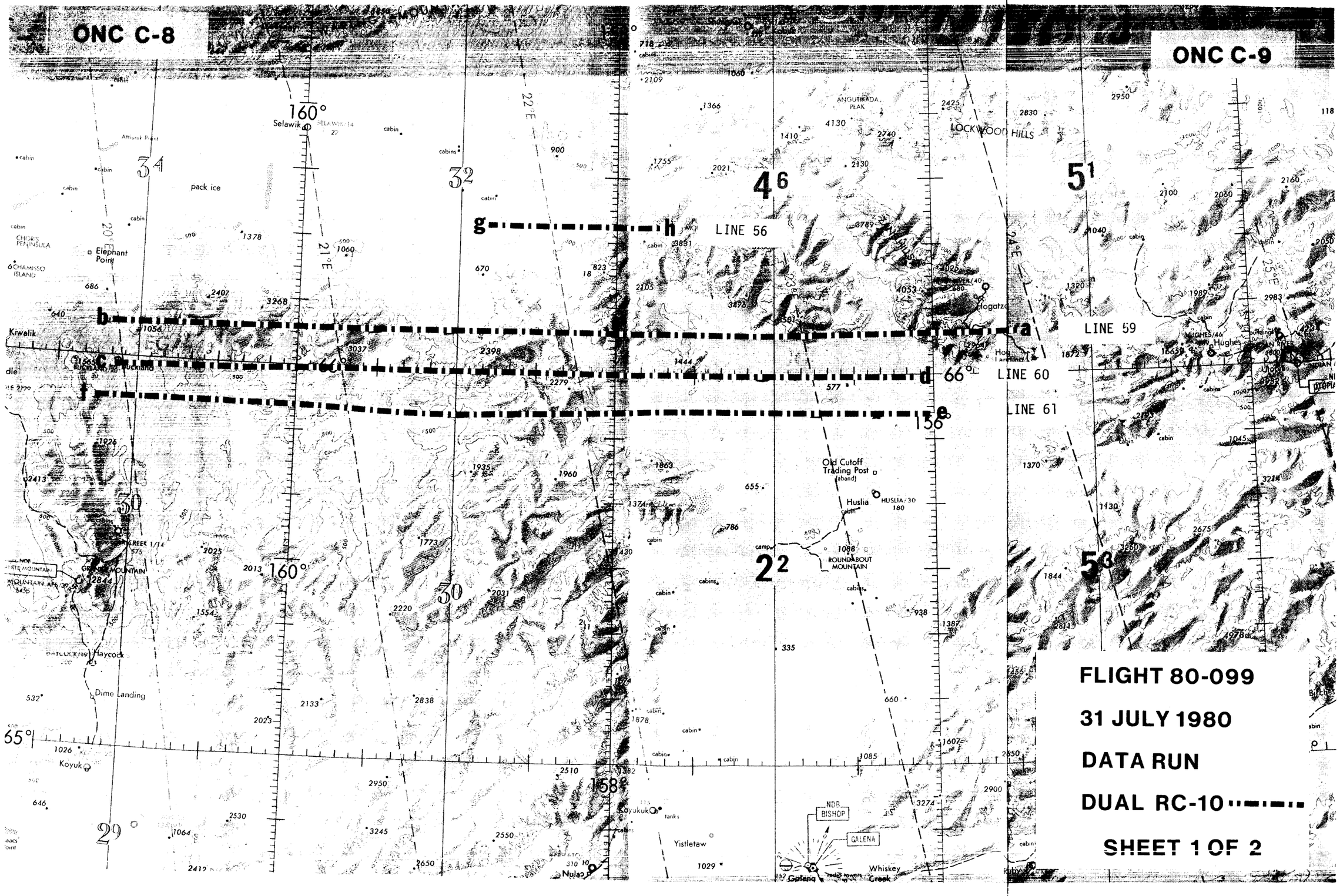
FLIGHT SUMMARY

80-099

This flight was flown in support of Flight Requests #0685 (Thomas, BLM/ Alaska State Office) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over several areas of Alaska (see Track Map). Aerosol Particulate Sampler (APS) data was collected throughout the flight above 60,000 feet although not indicated on the track map.

Most of the flight was clear, although some minor occasional cumulus was encountered. No semsitometric stepwedges were printed on either roll of photography. The quality of the photography is excellent with no camera or processing malfunctions noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



FLIGHT 80-099

31 JULY 1980

DATA RUN

DUAL RC-10

SHEET 1 OF 2

FLIGHT 80-099

31 JULY 1980

DATA RUN

DUAL RC-10 ·-·-·-·

SHEET 2 OF 2

LINE 37

LINE 38

LINE 40

LINE 41

LINE 43

ONC C-8

ONC C-9

FLIGHT SUMMARY REPORT

Flight No: 80-100

Date: 2 August 1980

FSR No: 1440

Julian Date: 215

Sensor Package: Dual RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0685 Support
Requestor: Thomas
#0047 Support
Requestor: Ferry

Area(s) Covered: Northern Alaska

SENSOR DATA

Accession No:	02925	02926	---
Sensor ID No:	026	036	024
Sensor Type:	RC-10	RC-10	APS
Focal Length:	12" 304.97mm	6" 153.19mm	---
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402	---
Filtration:	Wratten 12	Wratten 12 + 2.2AV	---
Spectral Band:	510-900nm	510-700nm	---
f Stop:	8	8	---
Shutter Speed:	1/250	1/400	---
No. of Frames:	69	37	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

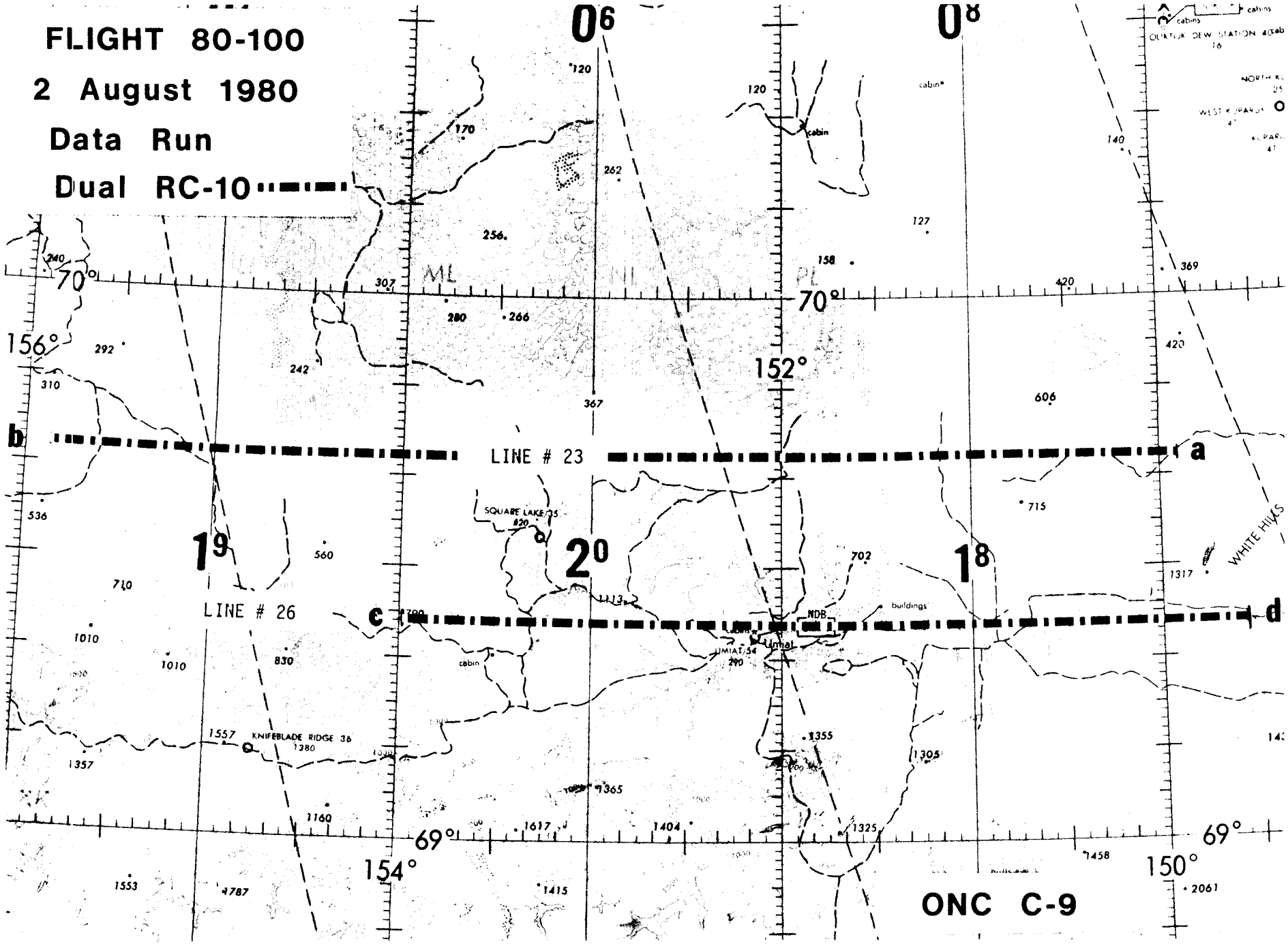
FLIGHT SUMMARY

80-100

This flight was flown in support of Flight Requests #0685 (Thomas, BLM/ Alaska State Office) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Dual RC-10 coverage was obtained over two lines on the north slope of Alaska (see Track Map). Aerosol Particulate Sampler (APS) data was collected for the full time above 60,000 feet but is not indictated on the track map.

The areas flown were substantially clear with thin cirrus over the first line. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


FLIGHT 80-100
2 August 1980
Data Run
Dual RC-10
LINE # 23
LINE # 26
a
b
c
d
06
08
19
20
18
70°
69°
156°
154°
152°
150°
SQUARE LAKE 35
KNIFEBLADE RIDGE 38
NDB
buildings
cabin
WHITE HILLS
ONC C-9

FLIGHT SUMMARY REPORT

Flight No: 80-102

Date: 15 July 1980

FSR No: 1444

Julian Date: 197

Sensor Package: Itek Optical Bar Panoramic Camera

Aircraft No: 4

Purpose of Flight: #0849 Support
Requestor: Kirsch

Area(s) Covered: Colorado

SENSOR DATA

Accession No:	02902
Sensor ID No:	029
Sensor Type:	Optical Bar
Focal Length:	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .20B
Spectral Band:	510-900nm
f Stop:	3.5
Shutter Speed:	1/250
No. of Frames:	83
% Overlap:	0 - stereo convergent mode
Quality:	Excellent
Remarks:	---

FLIGHT SUMMARY

80-102

This flight was flown in support of Flight Request #0849 (Kirsch, USGS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The Itek Optical Bar Panoramic Camera was flown in the stereo convergent mode near the Colorado/New Mexico state border (see Track Map).

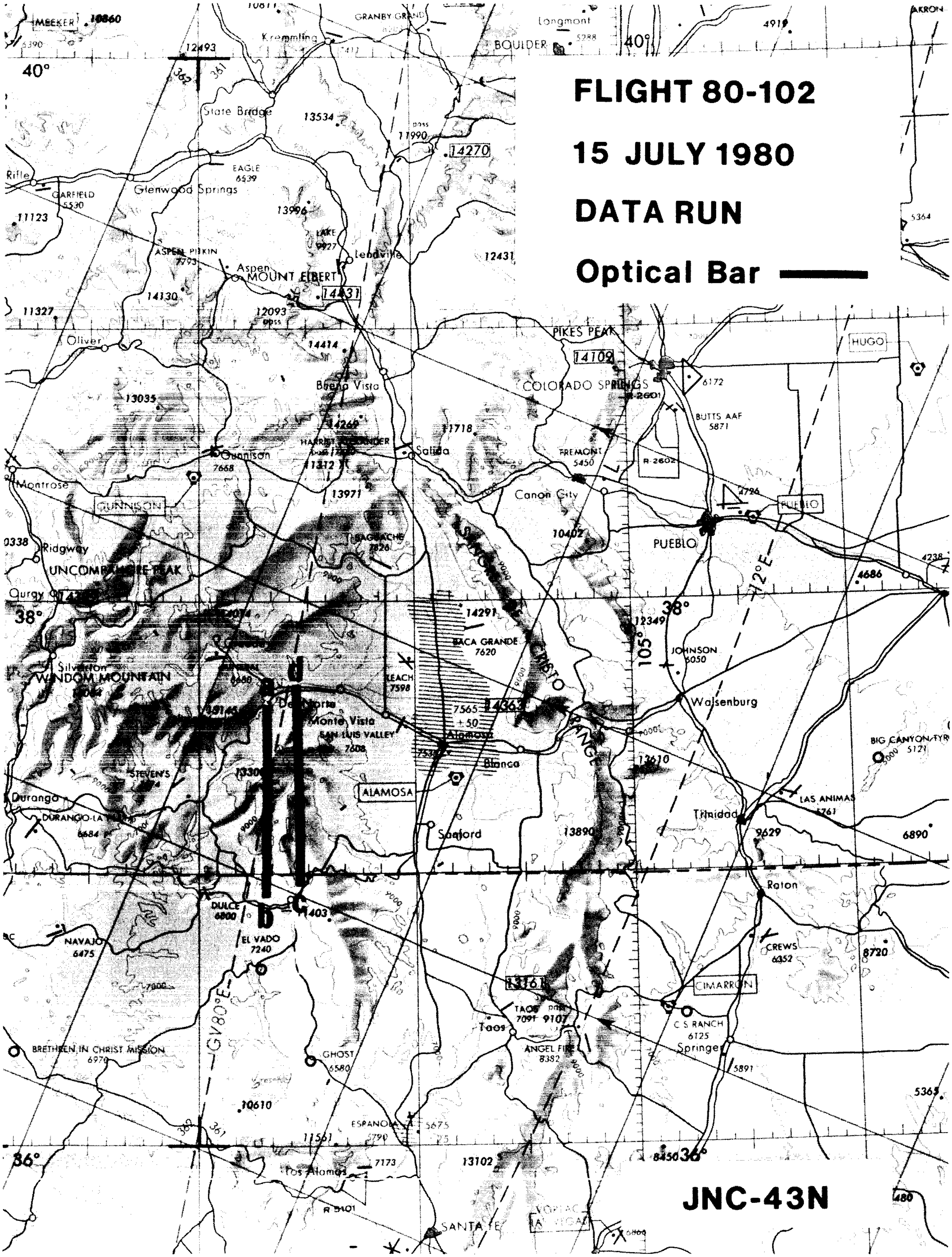
Some minor cumulus clouds were encountered at the northern ends of the data lines. The photography is excellent quality with no camera or processing malfunctions noted.

FLIGHT 80-102

15 JULY 1980

DATA RUN

Optical Bar ——



JNC-43N

FLIGHT SUMMARY REPORT

Flight No: 80-103

Date: 16 July 1980

FSR No: 1446

Julian Date: 186

Sensor Package: A-3 Configuration (two cameras only)
Aerosol Particulate Sampler (APS)

Aircraft No: 4

Purpose of Flight: #0666 Support
Requestor: Lumb
#0047 Support
Requestor: Ferry

Area(s) Covered: Nevada

SENSOR DATA

Accession No:	02903	02904	---
Sensor ID No:	HR-732	HR-732	APS
Sensor Type:	018	019	024
Focal Length:	24" 609.6mm	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-127	High Definition Aerochrome Infrared, SO-127	---
Filtration:	CC .20C	CC .20C	---
Spectral Band:	510-900nm	510-900nm	---
f Stop:	9	9	---
Shutter Speed:	1/75	1/75	---
No. of Frames:	184	266	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

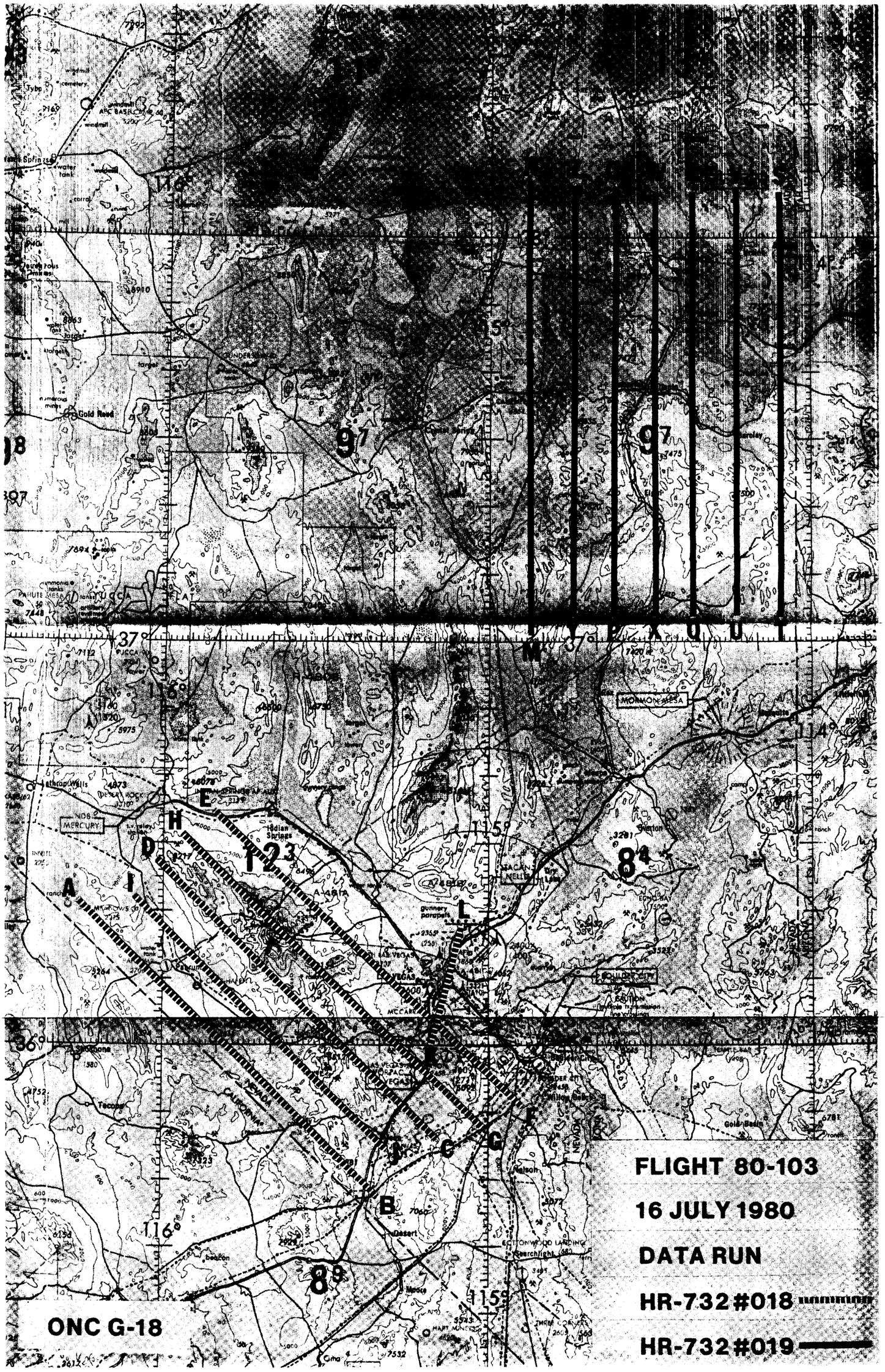
FLIGHT SUMMARY

80-103

This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ARC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Two cameras of the A-3 Configuration were operated independently over selected areas of southern Nevada (see Track Map). Aerosol Particulate Sampler (APS) data was collected at selected altitudes during climb out of Moffett Field, California.

Both areas were cloud-free. Due to a Time Code Generator Malfunction, no times were imaged in the data annotation. The times (GNT) listed in the Flight Line Data were approximated from the pilot's flight log. The quality of the photography is excellent with no other camera or processing malfunctions noted.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


ONC G-18
FLIGHT 80-103
16 JULY 1980
DATA RUN
HR-732 #018
HR-732 #019

FLIGHT SUMMARY REPORT

Flight No: 80-104

Date: 17 July 1980

FSR No: 1446

Julian Date: 199

Sensor Package: A-4 Camera Configuration
Lyman Hygrometer

Aircraft No: 4

Purpose of Flight: #0862 Support
Requestor: Weber
#0790 Support
Requestor: Page

Area(s) Covered: Oregon and Washington

SENSOR DATA

Accession No:	02905	02906	---
Sensor ID No:	035	039	067
Sensor Type:	RC-10	HR-732	Lyman Hygrometer
Focal Length:	6" 153.46mm	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20C + 2.2AV	CC .20C	---
Spectral Band:	510-900nm	510-900nm	---
f Stop:	4	8	---
Shutter Speed:	1/110	1/75	---
No. of Frames:	20	54	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

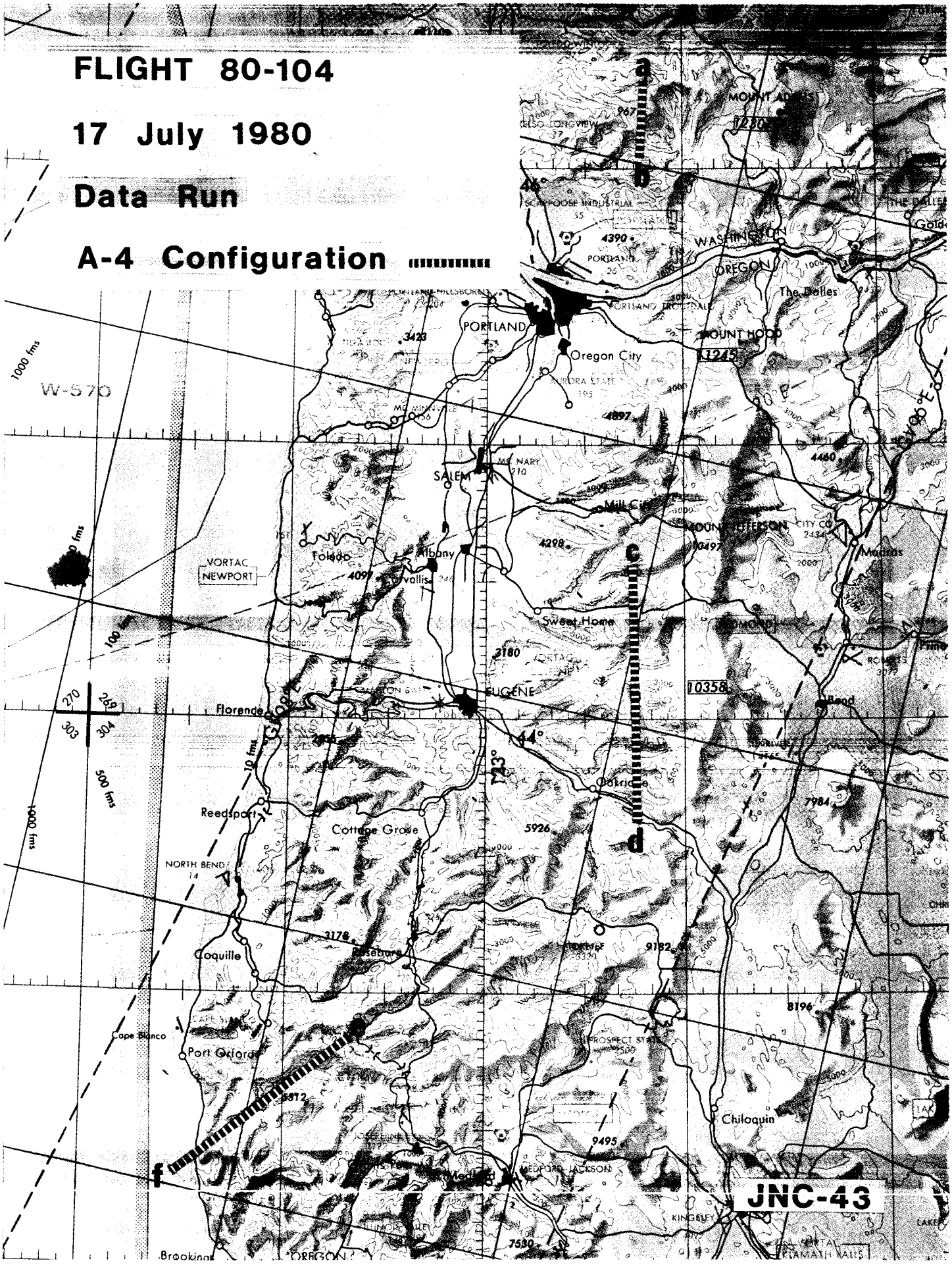
FLIGHT SUMMARY

80-104

This flight was flown in support of Flight Requests #0862 (Weber, USFS) and #0790 (Page, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The A-4 camera configuration was utilized to acquire photography over portions of Oregon and Washington (see Track Map). Additionally the Lyman Hygrometer was flown throughout the flight but is not indicated on the track map.

Some minor cloud-cover was encountered during the flight. No camera or processing or malfunctions were noted and the quality of the data is rated excellent.

The Lyman Hygrometer measures water vapor by sensing OH fluorescence produced when H_2O is photo dissociated by radiation from a hydrogen resonance lamp.[2] Ambient air is ducted from outside the aircraft into the hygrometer where the resonance lamp irradiates the sample volume. Calibration of the irradiating source is accomplished by a second photo-cell which measures fluctuations in the resonance lamp. The Lyman Hygrometer is operated by Dieter Kley, NOAA/Aeronomy Lab.


FLIGHT 80-104
17 July 1980
Data Run
A-4 Configuration
a
b
c
d
e
f
PORTLAND
Oregon City
SALEM
Albany
Corvallis
Toledo
Sweet Home
EUGENE
Florence
Reedsport
Coquille
Cape Blanco
Port Orford
Cottage Grove
Oakridge
Roseburg
Chiloquin
Madras
The Dalles
MOUNT HOOD
MOUNT JEFFERSON
WASHINGTON
OREGON
VORTAC NEWPORT
W-570
1000 fms
500 fms
100 fms
10 fms
JNC-43

FLIGHT SUMMARY REPORT

Flight No: 80-105

Date: 21 July 1980

FSR No: 1447

Julian Date: 203

Sensor Package: A-4 Configuration

Aircraft No: 4

Purpose of Flight: #0666 Support
Requestor: Lumb

Area(s) Covered: Eastern Washington

SENSOR DATA

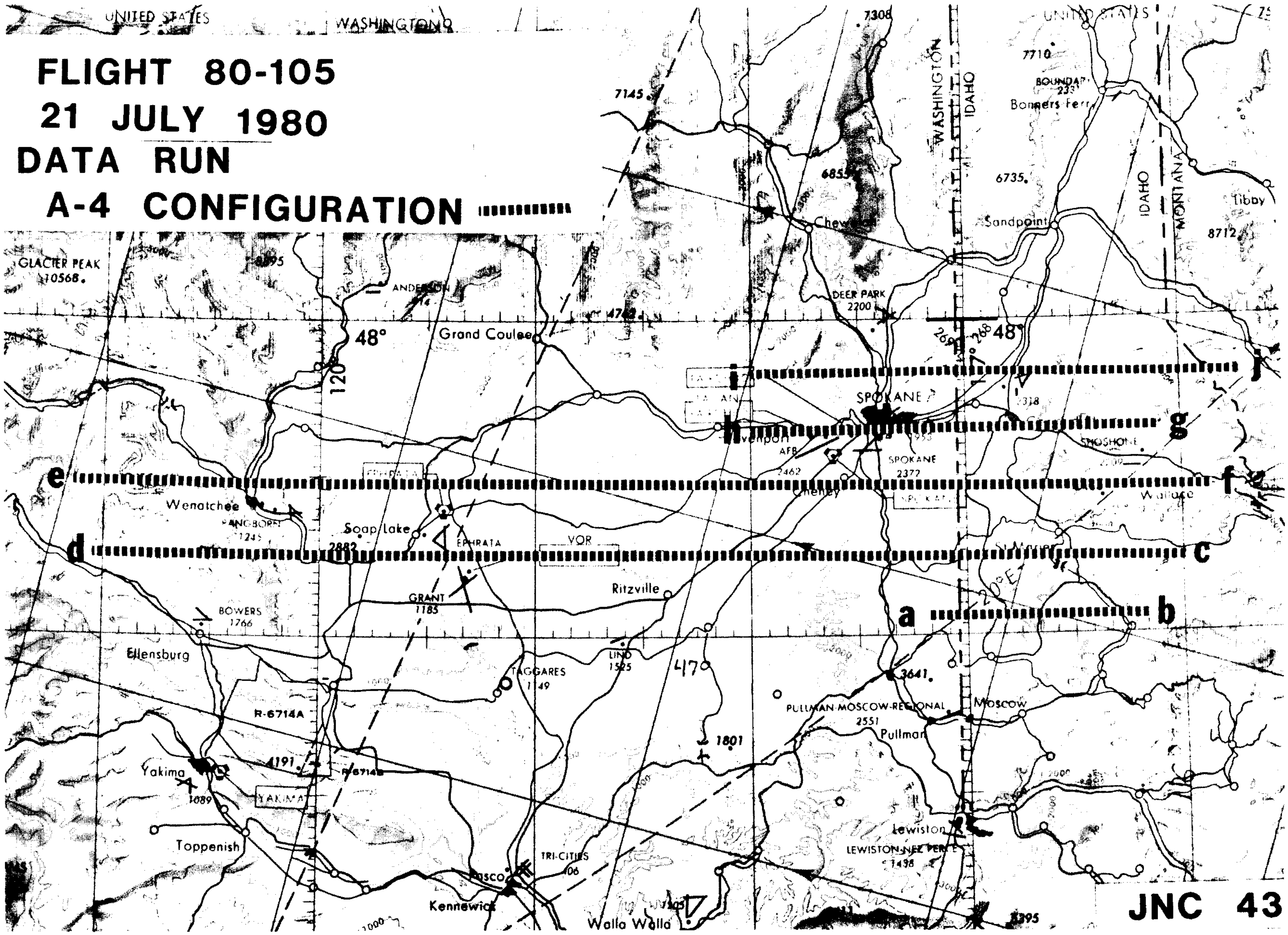
Accession No:	02915	02916
Sensor ID No:	035	039
Sensor Type:	RC-10	HR-732
Focal Length:	6" 153.46mm	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-127	High Definition Aerochrome Infrared, SO-127
Filtration:	CC .20C + 2.2AV	CC .20C
Spectral Band:	510-900nm	510-900nm
f Stop:	4	8
Shutter Speed:	1/110	1/75
No. of Frames:	101	368
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-105

This flight was flown in support of Flight Request #0666 (Lumb, NASA/ ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Photography was acquired over eastern Washington (see Track Map).

The photography acquired if of excellent quality with no processing malfunction noted. There was, however, one minor camera malfunction (see Flight Line Data).


FLIGHT 80-105
21 JULY 1980
DATA RUN
A-4 CONFIGURATION
a
b
c
d
e
f
g
h
i
j
UNITED STATES
WASHINGTON
IDAHO
MONTANA
GLACIER PEAK 10568
Grand Coulee
48°
120
Wenatchee
Soap Lake
EPHRATA
VOR
Ritzville
GRANT 1185
BOWERS 1766
Ellensburg
R-6714A
Yakima
Toppenish
Kennewick
TRI-CITIES
Walla Walla
SPOKANE
Cheney
DEER PARK 2200
Sandpoint
Bonners Ferry
Tibby
8712
7710
6735
7308
7145
6855
Wallace
Moscow
Pullman
PULLMAN-MOSCOW-REGIONAL 2551
Lewiston
LEWISTON-NEZ PERCE 1438
3641
1801
4191
JNC 43

FLIGHT SUMMARY REPORT

Flight No: 80-108

Date: 5 August 1980

FSR No: 1442

Julian Date: 218

Sensor Package: Dual RC-10

Aircraft No: 5

Purpose of Flight: #0685 Support
Requestor: Thomas

Area(s) Covered: Alaska

SENSOR DATA

Accession No:	02929	02928
Sensor ID No:	026	036
Sensor Type:	RC-10	RC-10
Focal Length:	12" 304.97mm	6" 153.19mm
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402
Filtration:	Wratten 12	Wratten 12 + 2.2AV
Spectral Band:	510-900nm	510-700nm
f Stop:	8	8
Shutter Speed:	1/250	1/400
No. of Frames:	448	234
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-108

This flight was flown in support of Flight Request #0685 (Thomas, BLM/ Alaska State Office) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Dual RC-10 photographic coverage was obtained over the eastern Alaska Range and west of Circle, Alaska (see Track Map).

Minor cirrus and cumulus clouds were encountered on all flight lines. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

LINE # 78
LINE # 79
LINE # 30
LINE # 81
LINE # 82
LINE # 83
LINE # 84
LINE # 85

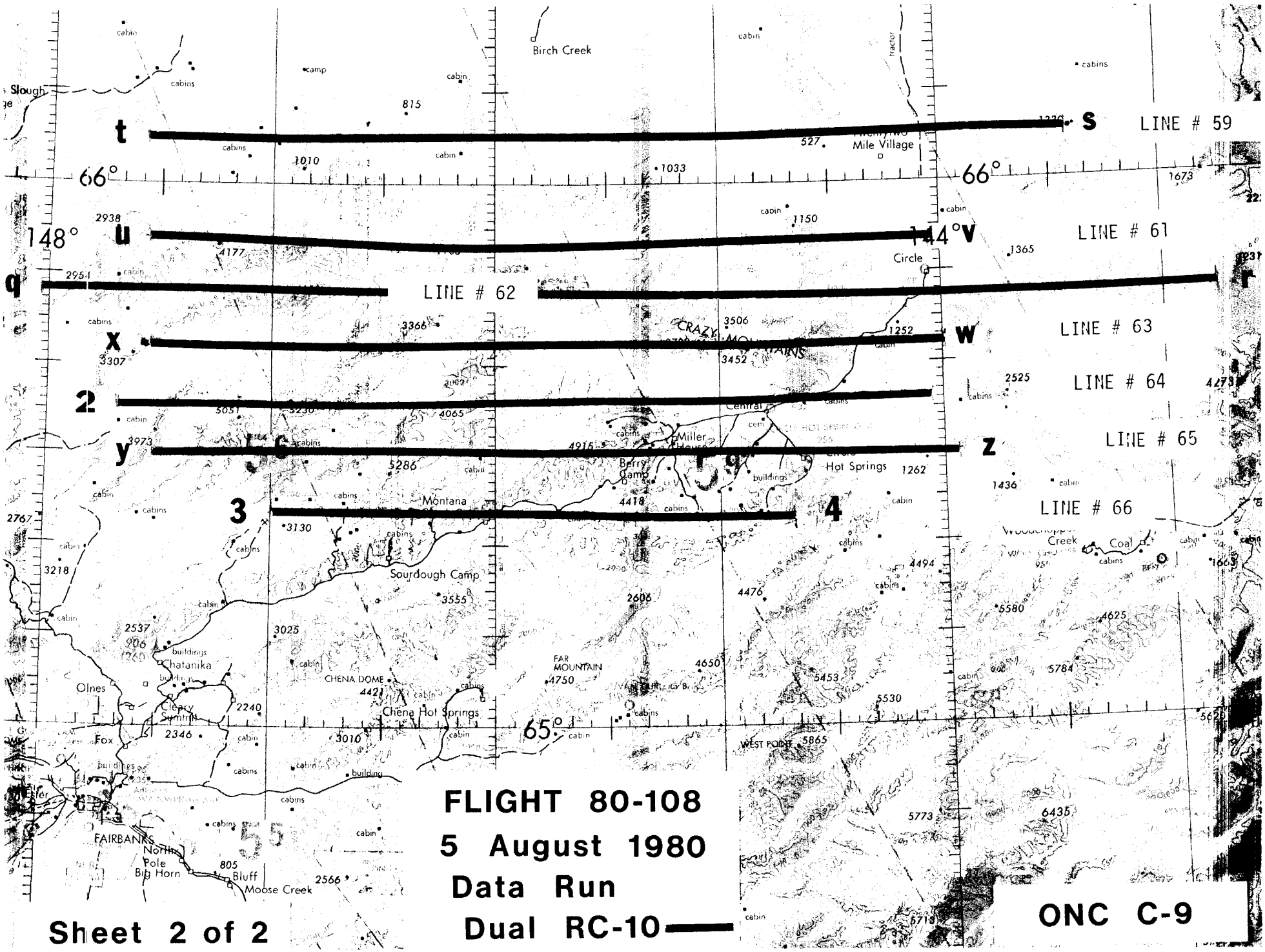
o p n m j i k l g h c d f e b a

ALASKA RANGE

FLIGHT 80-108
5 August 1980
Data Run
Dual RC-10

Sheet 1 of 2

ONC D-11


LINE # 59
LINE # 61
LINE # 62
LINE # 63
LINE # 64
LINE # 65
LINE # 66
FLIGHT 80-108
5 August 1980
Data Run
Dual RC-10
ONC C-9
Sheet 2 of 2
Birch Creek
Mile Village
Circle
Central
Miller House
Berry Camp
Hot Springs
Montana
Sourdough Camp
Chatanika
Olnes
Cleary Summit
Fox
Chena Hot Springs
CHENA DOME
FAR MOUNTAIN
WEST POINT
Woodchopper Creek
Coal
FAIRBANKS
North Pole
Big Horn
Bluff
Moose Creek
CRAZY MOUNTAINS
66°
65°
148°
144°

FLIGHT SUMMARY REPORT

Flight No: 80-109

Date: 7 August 1980

FSR No: 1448

Julian Date: 220

Sensor Package: Dual RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0666 Support
Requestor: Lumb
#0047 Support
Requestor: Ferry

Area(s) Covered: Cascades, OR/WA/CA

SENSOR DATA

Accession No:	02931	02932	---
Sensor ID No:	026	036	024
Sensor Type:	RC-10	RC-10	APS
Focal Length:	12" 304.97mm	6" 153.19mm	---
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402	---
Filtration:	Wratten 12	Wratten 12 + 2.2AV	---
Spectral Band:	510-900nm	510-700nm	---
f Stop:	8	8	---
Shutter Speed:	1/250	1/400	---
No. of Frames:	21	17	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

FLIGHT SUMMARY

80-109

This flight was flown in support of Flight Requests #0666 (Lumb, NASA/ARC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Dual RC-10 photographic coverage was acquired over the major peaks of the Cadcade Range in Washington, Oregon and California.

Cloud cover was encountered over Mt. Rainier and Mt. St. Helens with the rest of the peaks clear. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.

FLIGHT SUMMARY REPORT

Flight No: 80-110

Date: 4 August 1980

FSR No: 1443

Julian Date: 217

Sensor Package: Dual RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0685 Support
Requestor: Thomas
#0047 Support
Requestor: Ferry

Area(s) Covered: S. Brooks Range, Alaska

SENSOR DATA

Accession No:	02927	02930	---
Sensor ID No:	026	036	024
Sensor Type:	RC-10	RC-10	APS
Focal Length:	12" 304.97mm	6" 153.19mm	---
Film Type:	Aerochrome Infrared, SO-193	Plus-X, 2402	---
Filtration:	Wratten 12	Wratten 12 + 2.2AV	---
Spectral Band:	510-900nm	510-700nm	---
f Stop:	8	8	---
Shutter Speed:	1/250	1/400	---
No. of Frames:	98	51	---
% Overlap:	60	60	---
Quality:	Excellent	Excellent	---
Remarks:	---	---	Non-imaging sensor

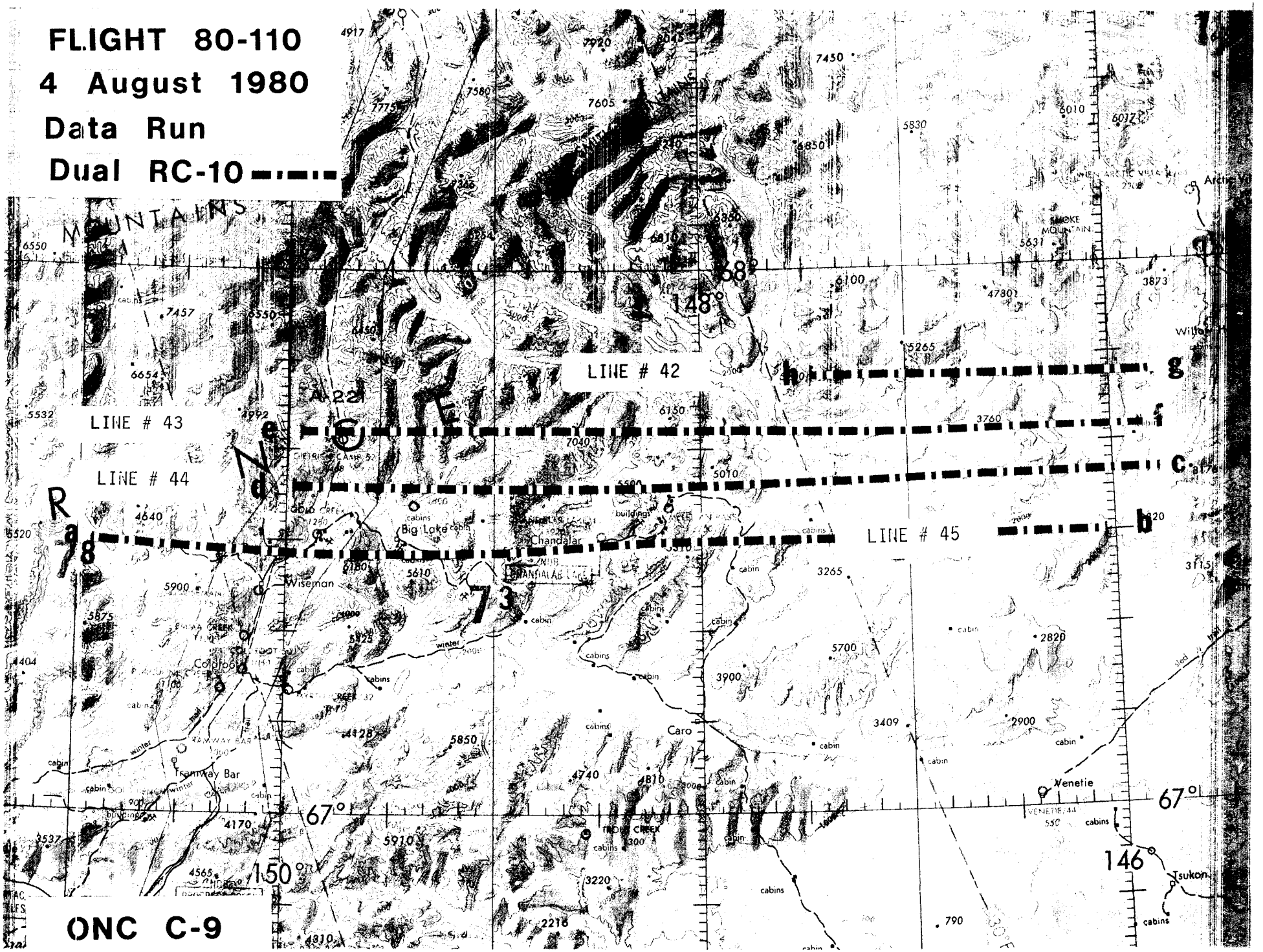
FLIGHT SUMMARY

80-110

This flight was flown in support of Flight Requests #0685 (Thomas, BLM/ Alaska State Office) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Dual RC-10 photographic coverage was obtained over the Wiseman/Chandalar Lake area of the Brooks Range (see Track Map). Aerosol Particulate Sampler (APS) data was collected for the full time at altitude, but is not depicted on the track map.

Minor cumulus and cirrus was encountered on all flight lines. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


FLIGHT 80-110
4 August 1980
Data Run
Dual RC-10
LINE # 42
LINE # 43
LINE # 44
LINE # 45
a
b
c
d
e
f
g
h
Big Lake
Chandalar
Wiseman
Coldfoot
Tramway Bar
Caro
Wenetie
Tsukon
148°
150°
146°
67°
68°
ONC C-9

FLIGHT SUMMARY REPORT

Flight No: 80-112

Date: 13 August 1980

FSR No: 1449

Julian Date: 226

Sensor Package: Dual RC-10

Aircraft No: 5

Purpose of Flight: #0864 Support
Requestor: Sandness
#0666 Support
Requestor: Lumb

Area(s) Covered: Eastern Oregon and Mt. Lassen, CA

SENSOR DATA

Accession No:	02933	02934
Sensor ID No:	036	033
Sensor Type:	RC-10	RC-10
Focal Length:	6" 153.19mm	6" 153.17mm
Film Type:	High Definition Aerochrome Infrared, SO-127	Panatomic X, 3400
Filtration:	CC .20C + 2.2AV	Wratten 12 + 2.2AV
Spectral Band:	510-900nm	510-700nm
f Stop:	4	5.6
Shutter Speed:	1/110	1/125
No. of Frames:	25	25
% Overlap:	60	60
Quality:	Slightly under-exposed	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-112

This flight was flown in support of Flight Request #0864 (Sandness, Battelle/Pacific Northwest Labs) and #0666 (Lumb, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Dual RC-10 coverage was obtained over Mt. Lassen, CA and eastern Oregon.

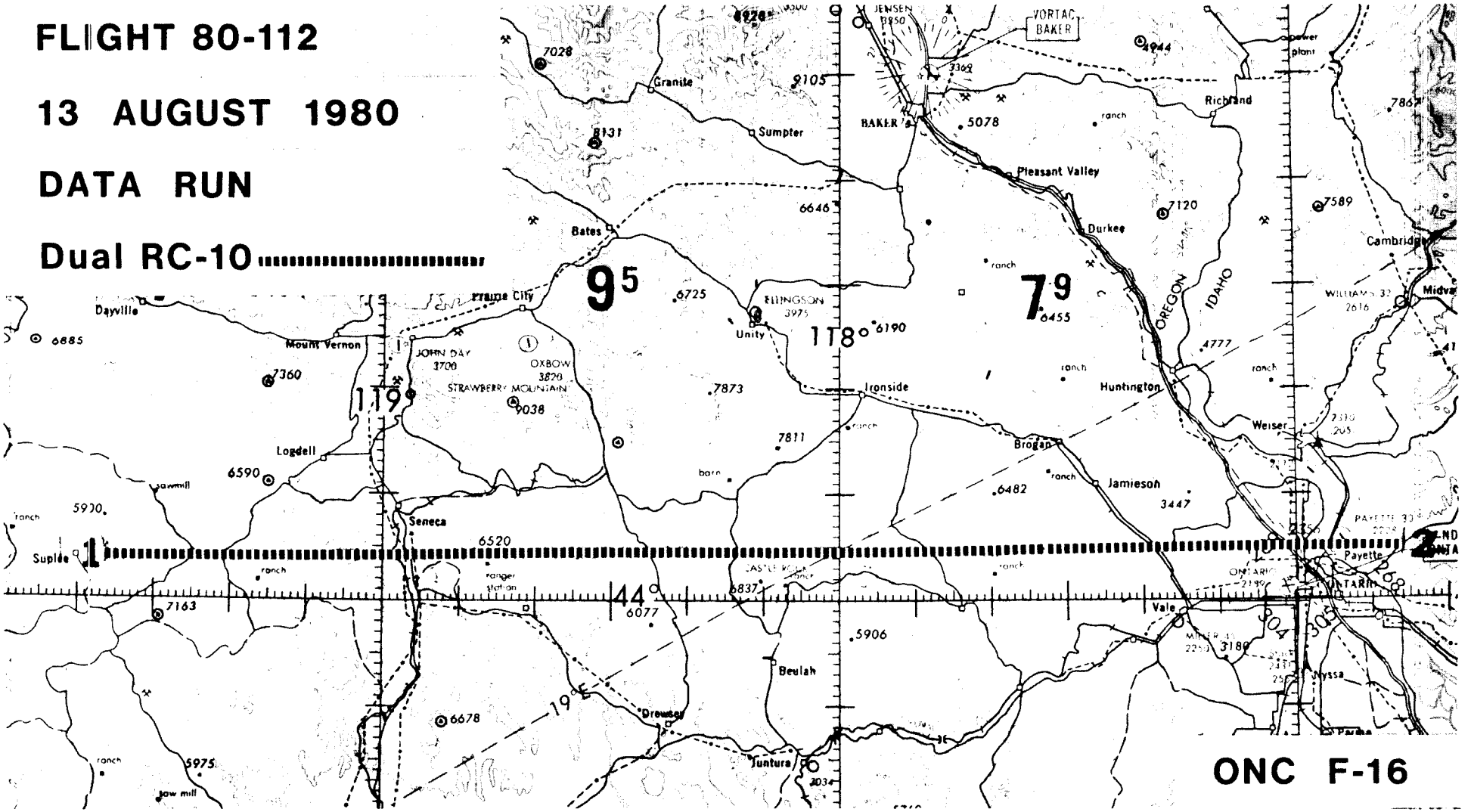
The area flown was cloud-free. Because of cumulus build-up to the north the entire area scheduled to be flown in eastern Oregon was not flown. The color infrared coverage was slightly underexposed, but useable, and rated good. No camera or processing malfunctions were noted and the quality of the black and white coverage is rated excellent.

FLIGHT 80-112

13 AUGUST 1980

DATA RUN

Dual RC-10



ONC F-16

FLIGHT SUMMARY REPORT

Flight No: 80-119

Date: 20 August 1980

FSR No: 1450

Julian Date: 233

Sensor Package: Dual RC-10

Aircraft No: 5

Purpose of Flight: #0864 Support
Requestor: Sandness

Area(s) Covered: Eastern Oregon

SENSOR DATA

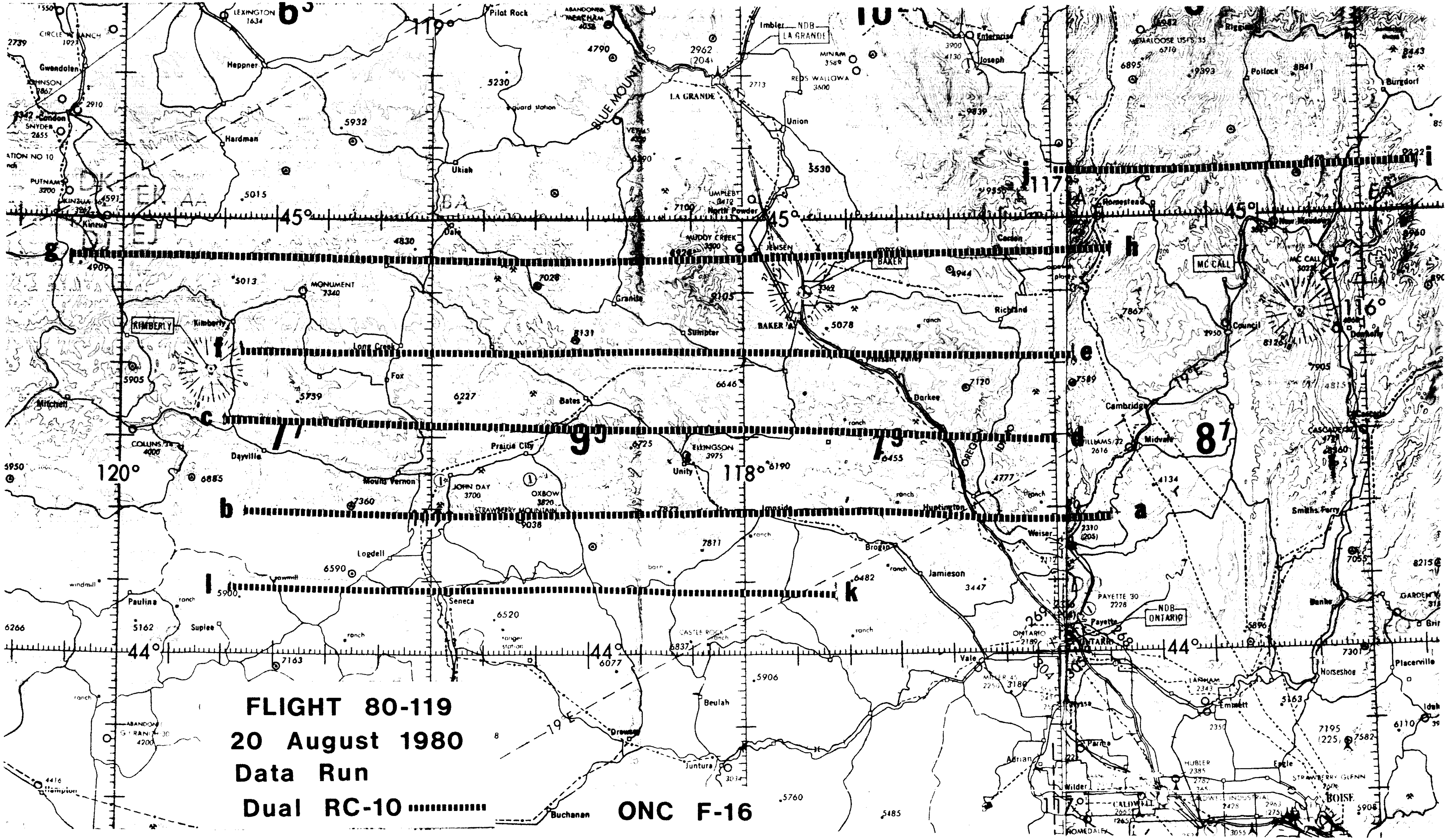
Accession No:	02935	02936
Sensor ID No:	036	033
Sensor Type:	RC-10	RC-10
Focal Length:	6" 153.19mm	6" 153.17mm
Film Type:	High Definition Aerochrome Infrared, SO-127	Panatomic X, 3400
Filtration:	CC .20C + 2.2AV	Wratten 12 + 2.2AV
Spectral Band:	510-900nm	510-700nm
f Stop:	4	5.6
Shutter Speed:	1/75	1/125
No. of Frames:	99	99
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-119

This flight was flown in support of Flight Request #0864 (Sandness, Battelle/Pacific Northwest Labs) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Dual RC-10 coverage was obtained over a portion of eastern Oregon (see Track Map).

Minor cumulus cloudcover was encountered over the northern most flight line. The remaining area was clear. No camera or processing malfunctions were noted and the quality of the data is rated excellent.


FLIGHT 80-119
20 August 1980
Data Run
Dual RC-10
ONC F-16
a
b
c
d
e
f
g
h
i
j
k
l
45°
44°
120°
119°
118°
117°
116°
Condon
Heppner
Lexington
Hardman
Kimberly
Mitchell
Dayville
Monument
Long Creek
Fox
Mount Vernon
John Day
Prairie City
Bates
Unity
Seneca
Logdell
Paulina
Suplee
Pilot Rock
Ukiah
Dale
Granite
Sumpter
La Grande
Union
North Powder
Baker
Imbler
Enterprise
Joseph
Richland
Homestead
Cuprum
Council
McCall
Donnelly
Cambridge
Midvale
Weiser
Huntington
Ironside
Brogan
Jamieson
Vale
Ontario
Payette
Emmett
Nyssa
Parma
Adrian
Wilder
Caldwell
Homedale
Boise
Horseshoe Bend
Placerville
Smiths Ferry
Banks
Cascade
Burgdorf
Pollock
Riggins
Drewsey
Juntura
Beulah
Buchanan
Hampton
BLUE MOUNTAINS
STRAWBERRY MOUNTAIN

FLIGHT SUMMARY REPORT

Flight No: 80-121

Date: 21 August 1980

FSR No: 1451

Julian Date: 234

Sensor Package: Itek Optical Bar Panoramic Camera

Aircraft No: 5

Purpose of Flight: #0859 Support
Requestor: Weber

Area(s) Covered: Colorado

SENSOR DATA

Accession No:	02937
Sensor ID No:	029
Sensor Type:	Optical Bar
Focal Length:	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .20C
Spectral Band:	510-900nm
f Stop:	3.5
Shutter Speed:	1/300
No. of Frames:	642
% Overlap:	60
Quality:	Excellent
Remarks:	---

FLIGHT SUMMARY

80-121

This flight was flown in support of Flight Request #0859 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Optical Bar data was acquired over Colorado (see Track Map).

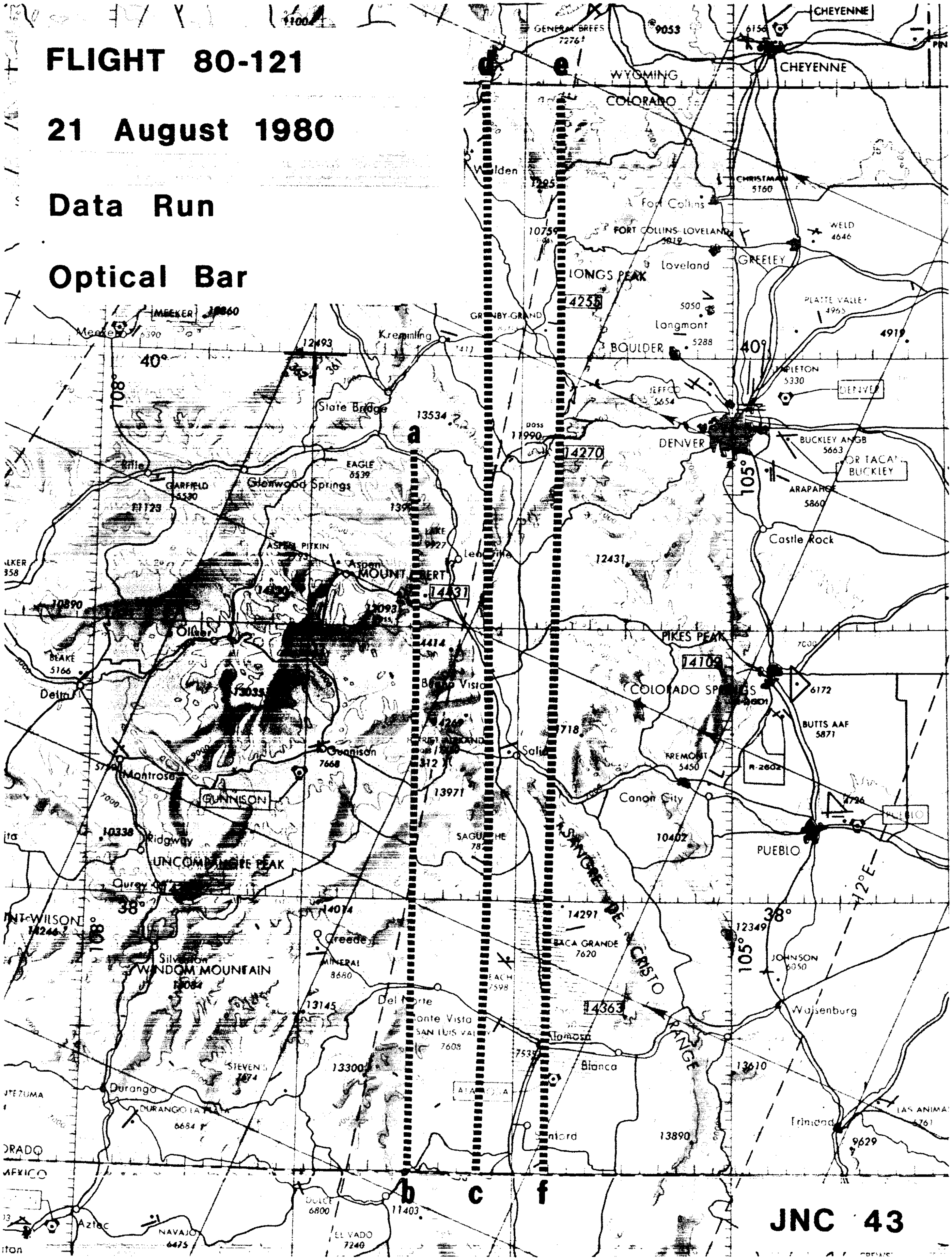
The entire area was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

FLIGHT 80-121

21 August 1980

Data Run

Optical Bar



JNC 43

FLIGHT SUMMARY REPORT

Flight No: 80-122

Date: 22 August 1980

FSR No: 1452

Julian Date: 235

Sensor Package: Itek Optical Bar Panoramic Camera

Aircraft No: 5

Purpose of Flight: #0859 Support
Requestor: Weber

Area(s) Covered: Colorado

SENSOR DATA

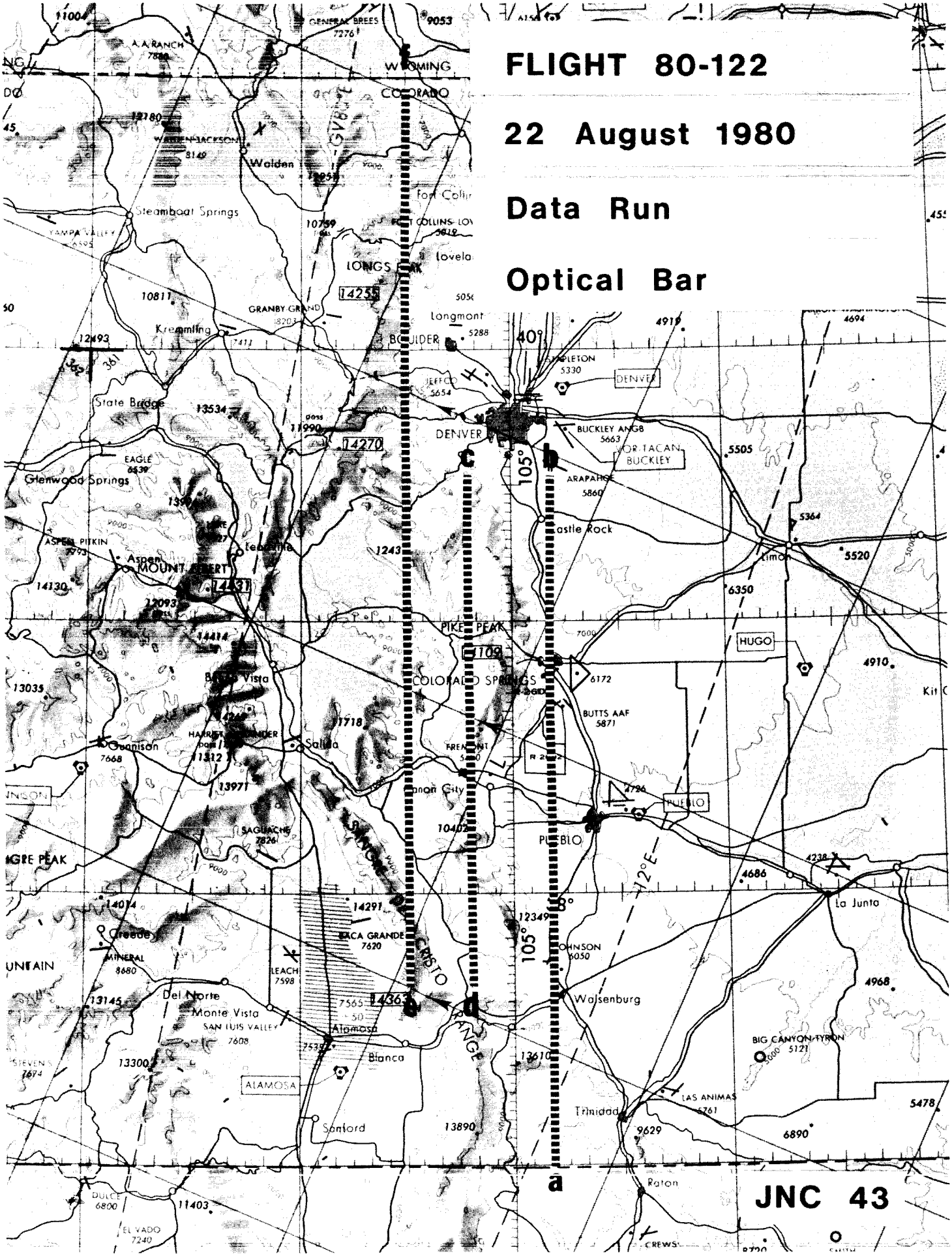
Accession No:	02938
Sensor ID No:	029
Sensor Type:	Optical Bar
Focal Length:	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .20C
Spectral Band:	510-900nm
f Stop:	3.5
Shutter Speed:	1/300
No. of Frames:	465
% Overlap:	60
Quality:	Excellent
Remarks:	---

FLIGHT SUMMARY

80-122

This flight was flown in support of Flight Request #0859 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Optical Bar data was acquired over Colorado (see Track Map).

Moderate cumulus was encountered on one flight line (see Flight Line Data). The rest of the area was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.


FLIGHT 80-122
22 August 1980
Data Run
Optical Bar
JNC 43
a
b
c
d
105°
40°
12°E
WYOMING
COLORADO
Steamboat Springs
Walden
Fort Collins
Loveland
LONGS PEAK
14255
Longmont
BOULDER
GRANBY GRAND
Kremmling
State Bridge
Glenwood Springs
EAGLE
Aspen
MOUNT EVANS
14431
Leadville
DENVER
BUCKLEY ANGB
ARAPAHOE
Castle Rock
Limon
PIKE PEAK
14109
COLORADO SPRINGS
HUGO
BUTTS AAF
Salida
Gunnison
Canon City
PUEBLO
La Junta
Creede
Del Norte
Monte Vista
SAN LUIS VALLEY
Alamosa
Blanca
ALAMOSA
Sanford
Wolsenburg
Trinidad
LAS ANIMAS
Raton
SANGRE DE CRISTO RANGE

FLIGHT SUMMARY REPORT

Flight No: 80-123

Date: 25 August 1980

FSR No: 1453

Julian Date: 238

Sensor Package: A-3 Configuration

Aircraft No: 5

Purpose of Flight: #0885 Support
Requestor: Weber

Area(s) Covered: Plumas National Forest, California

SENSOR DATA

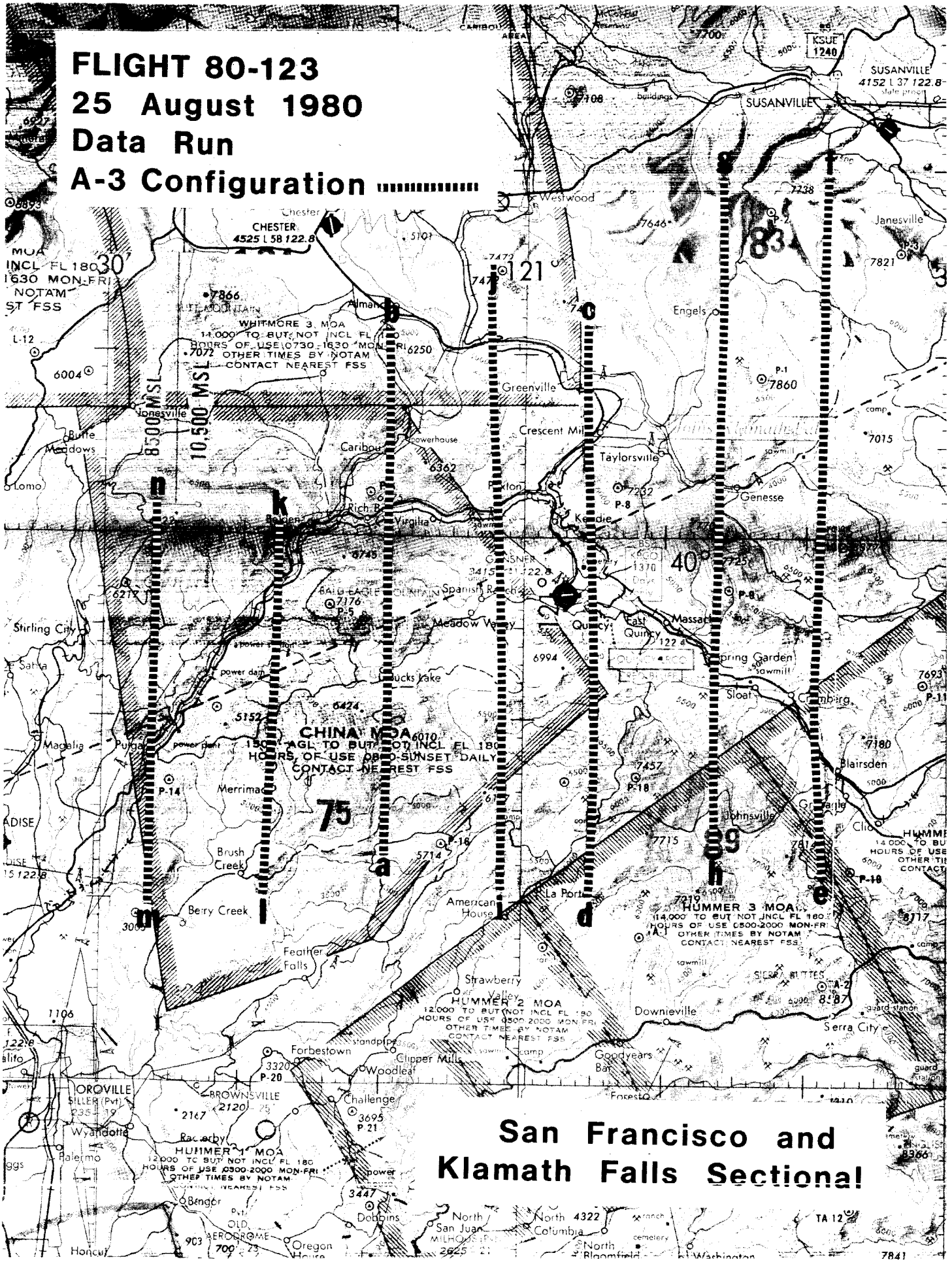
Accession No:	02939	02940	02941
Sensor ID No:	018	019	020
Sensor Type:	HR-732	HR-732	HR-732
Focal Length:	24" 609.6mm	24" 609.6mm	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-127	Natural Color, SO-242	Panatomic X, 3400
Filtration:	CC .20C	NONE	Wratten 12
Spectral Band:	510-900nm	400-700nm	510-700nm
f Stop:	8	8	8
Shutter Speed:	1/75	1/75	1/75
No. of Frames:	139	139	139
% Overlap:	60	60	60
Quality:	Excellent	Excellent	Excellent
Remarks:	---	---	---

FLIGHT SUMMARY

80-123

This flight was flown in support of Flight Request #0885 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The data was collected over Plumas National Forest, California.

The entire area was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.


FLIGHT 80-123
25 August 1980
Data Run
A-3 Configuration
San Francisco and
Klamath Falls Sectional
CHESTER
4525 L 58 122.8
SUSANVILLE
4152 L 37 122.8
WHITMORE 3 MOA
14,000 TO BUT NOT INCL FL
HOURS OF USE 0730-1630 MON-FRI
OTHER TIMES BY NOTAM
CONTACT NEAREST FSS
CHINA MOA
AGL TO BUT NOT INCL FL 180
HOURS OF USE 0800-SUNSET DAILY
CONTACT NEAREST FSS
HUMMER 3 MOA
14,000 TO BUT NOT INCL FL 180
HOURS OF USE 0500-2000 MON-FRI
OTHER TIMES BY NOTAM
CONTACT NEAREST FSS
HUMMER 2 MOA
12,000 TO BUT NOT INCL FL 180
HOURS OF USE 0500-2000 MON-FRI
OTHER TIMES BY NOTAM
CONTACT NEAREST FSS
HUMMER 1 MOA
12,000 TO BUT NOT INCL FL 180
HOURS OF USE 0500-2000 MON-FRI
OTHER TIMES BY NOTAM
8500 MSL
10,500 MSL
Westwood
Janesville
Greenville
Crescent Mill
Taylorsville
Genesse
Quincy
East Quincy
Spring Garden
Blairsden
Johnsville
Meadow Valley
Stirling City
Magalia
Merrimac
Brush Creek
Berry Creek
Feather Falls
American House
La Porte
Strawberry Valley
Downieville
Sierra City
Forbestown
Clipper Mills
Woodleaf
Challenge
Oroville
Brownsville
Wyandotte
Palermo
Bangor
Dobbins
Oregon House
North San Juan
North Columbia
Bloomfield
Washington
Engels
Caribou
Virgilia
Keddie
Sloat
Goodyears Bar
Forest
Honcut

FLIGHT SUMMARY REPORT

Flight No: 80-140

Date: 23 September 1980

FSR No: 1475

Julian Date: 267

Sensor Package: Daedalus Multispectral Scanner (DMS)

Aircraft No: 4

Purpose of Flight: #0889 Support
Requestor: Winter

Area(s) Covered: Santa Cruz and Vandenberg AFB, California

SENSOR DATA

Accession No:	---
Sensor ID No:	059
Sensor Type:	DMS
Focal Length:	---
Film Type:	---
Filtration:	---
Spectral Band:	.38 - 1.10um 10.4 - 12.5um
f Stop:	---
Shutter Speed:	---
No. of Frames:	---
% Overlap:	---
Quality:	---
Remarks:	Tape data only

FLIGHT SUMMARY

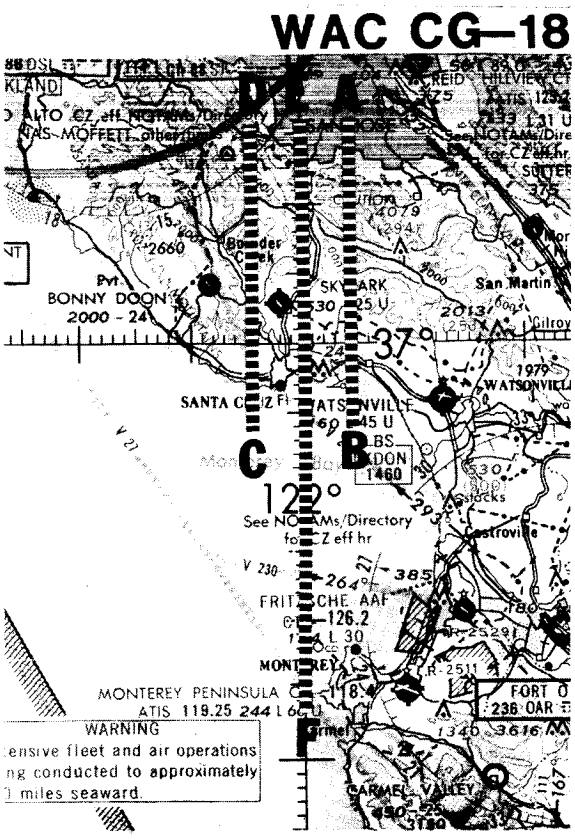
80-140

This flight was flown in support of Flight Request #0889 (Winter, IBM) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Daedalus Multispectral Scanner (DMS) data was acquired during a flight over Santa Cruz and Vandenberg AFB, California (see Track Map).

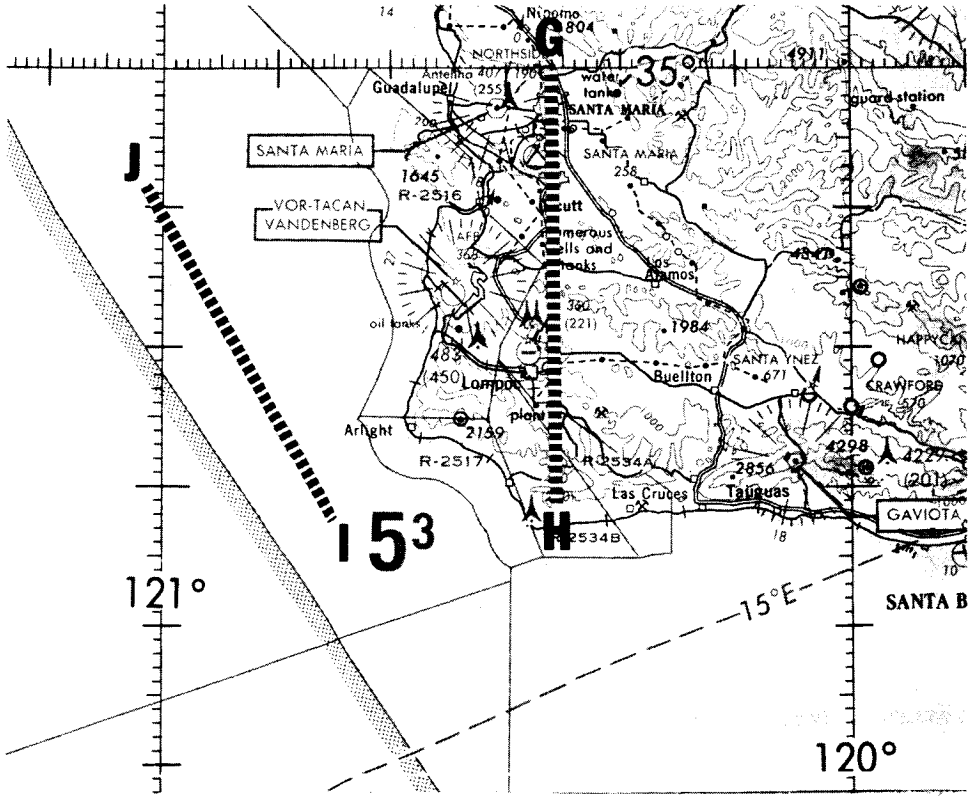
The Daedalus Multispectral Scanner is a modified Daedalus DEI-1260 eleven channel scanner. The system is entirely digital, with ten channels in the visible and near visible portions of the spectrum and one channel in the thermal infrared region. The scanner has an IFOV of either 1.25 or 2.5 milliradians depending on the scanhead utilized. Flight data tapes are ground processed to produce computer compatible tapes. Sensor specifications are:

IFOV	1.25mrad	2.5mrad
Pixels/scan line	715	715
Scan angle	42°	85°
Swath width	8nm	18nm
Scan rate	10 lines/sec	10 lines/sec
Resolution (from 65,000 ft)	80 ft	160 ft

Channel 1	.38 - .42um	Channel 7	.65 - .69um
Channel 2	.42 - .45um	Channel 8	.70 - .79um
Channel 3	.45 - .50um	Channel 9	.80 - .89um
Channel 4	.50 - .55um	Channel 10	.90 - 1.10um
Channel 5	.55 - .60um	Channel 11	10.40 - 12.50um
Channel 6	.60 - .65um		



FLIGHT 80—140
23 SEPT 1980
DATA RUN
DMS



FLIGHT SUMMARY REPORT

Flight No: 80-141

Date: 27 August 1980

FSR No: 1454

Julian Date: 240

Sensor Package: Itek Optical Bar Panoramic Camera

Aircraft No: 5

Purpose of Flight: #0884 Support
Requestor: Weber

Area(s) Covered: Plumas National Forest, CA

SENSOR DATA

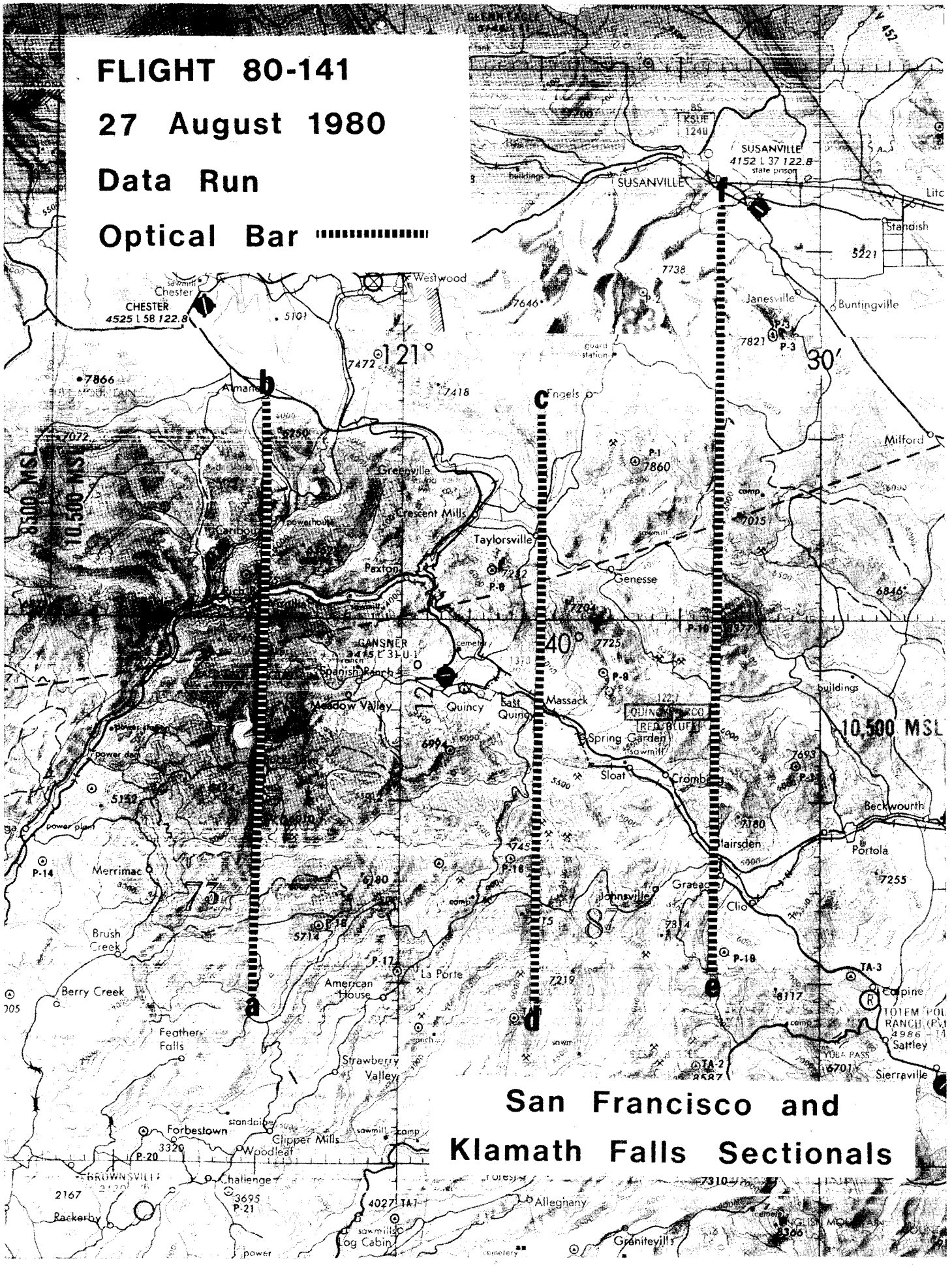
Accession No:	02942
Sensor ID No:	029
Sensor Type:	Optical Bar
Focal Length:	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .20C
Spectral Band:	510-900nm
f Stop:	3.5
Shutter Speed:	1/300
No. of Frames:	108
% Overlap:	60
Quality:	Excellent
Remarks:	---

FLIGHT SUMMARY

80-141

This flight was flown in support of Flight Request #0884 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The Itek Optical Bar Panoramic Camera was flown over the Plumas National Forest in northern California.

The entire area was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.


FLIGHT 80-141
27 August 1980
Data Run
Optical Bar
a
b
c
d
e
121°
30'
40°
77
87
10,500 MSL
8500 MSL
10,500 MSL
San Francisco and
Klamath Falls Sectionals

FLIGHT SUMMARY REPORT

Flight No: 80-142

Date: 28 August 1980

FSR No: 1455

Julian Date: 241

Sensor Package: Daedalus Multispectral Scanner (DMS)

Aircraft No: 4

Purpose of Flight: #0666 Support
Requestor: Lumb

Area(s) Covered: San Francisco Bay Area

SENSOR DATA

Accession No:	---
Sensor ID No:	059
Sensor Type:	DMS (2.5 mrad)
Focal Length:	---
Film Type:	---
Filtration:	---
Spectral Band:	.38 - 1.10um 10.4 - 12.5um
f Stop:	---
Shutter Speed:	---
No. of Frames:	---
% Overlap:	---
Quality:	---
Remarks:	Tape data only

FLIGHT SUMMARY

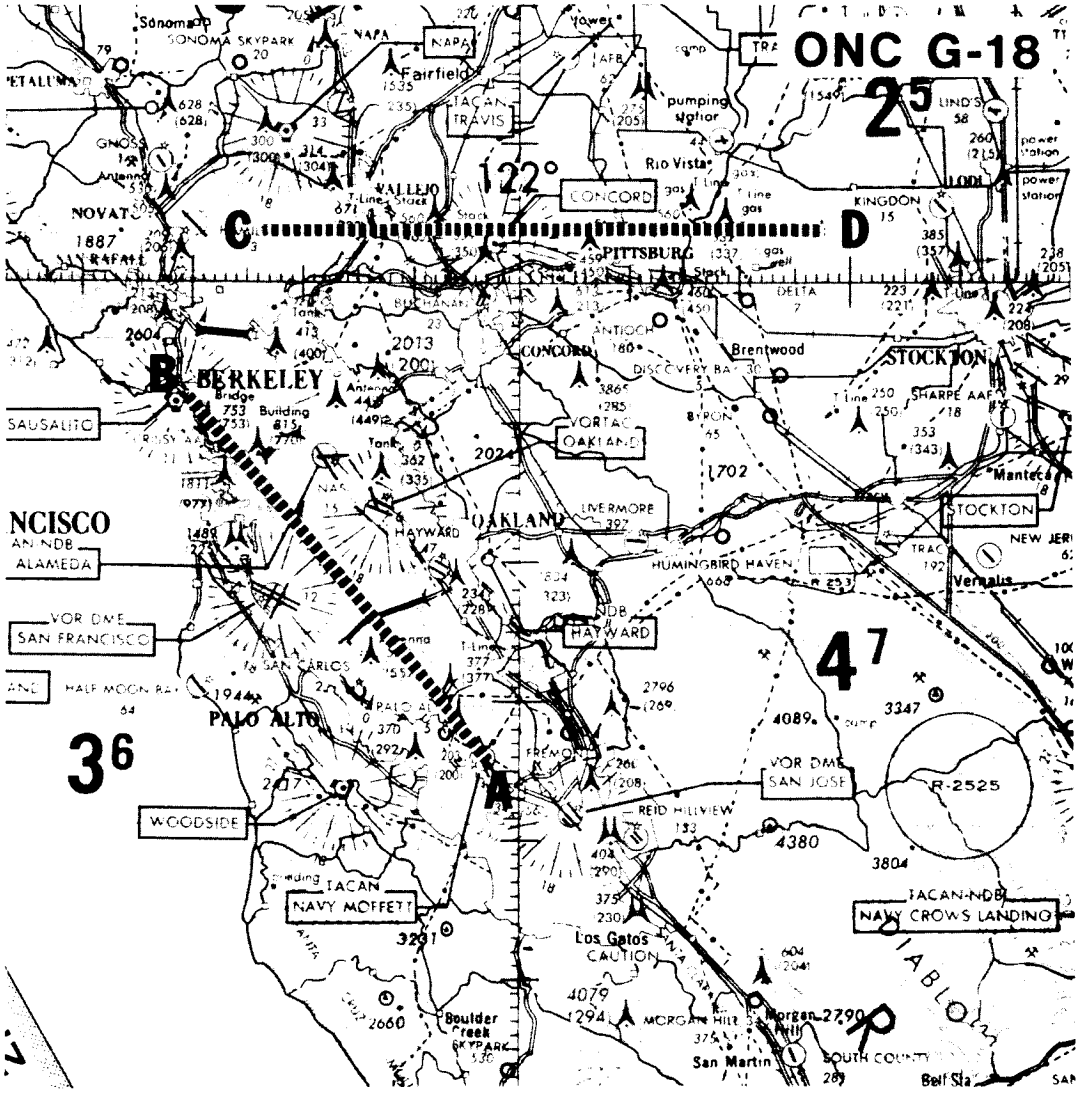
80-142

This flight was flown in support of Flight Request #0666 (Lumb, NASA/ ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Daedalus Multispectral Scanner (DMS) data were acquired over the San Francisco Area (see Track Map).

The Daedalus Multispectral Scanner is a modified Daedalus DEI-1260 eleven channel scanner. The system is entirely digital, with ten channels in the visible and near visible portions of the spectrum and one channel in the thermal infrared region. The scanner has an IFOV of either 1.25 or 2.5 milliradians depending on the scanhead utilized. Flight data tapes are ground processed to produce computer compatible tapes. Sensor specifications are:

IFOV	1.25mrad	2.5mrad
Pixels/scan line	715	715
Scan angle	42°	85°
Swath width	8nm	18nm
Scan rate	10 lines/sec	10 lines/sec
Resolution (from 65,000 ft)	80 ft	160 ft

Channel 1	.38 - .42um	Channel 7	.65 - .69um
Channel 2	.42 - .45um	Channel 8	.70 - .79um
Channel 3	.45 - .50um	Channel 9	.80 - .89um
Channel 4	.50 - .55um	Channel 10	.90 - 1.10um
Channel 5	.55 - .60um	Channel 11	10.40 - 12.50um
Channel 6	.60 - .65um		



FLIGHT 80-142

28 August 1980

Data Run

DMS .....

FLIGHT SUMMARY REPORT

Flight No: 80-143

Date: 28 August 1980

FSR No: 1456

Julian Date: 241

Sensor Package: Daedalus Multispectral Scanner (DMS)

Aircraft No: 4

Purpose of Flight: #0666 Support
Requestor: Lumb

Area(s) Covered: San Francisco Bay Area

SENSOR DATA

Accession No:	---
Sensor ID No:	059
Sensor Type:	DMS (2.5 mrad)
Focal Length:	---
Film Type:	---
Filtration:	---
Spectral Band:	.38 - 1.10um 10.4 - 12.5um
f Stop:	---
Shutter Speed:	---
No. of Frames:	---
% Overlap:	---
Quality:	---
Remarks:	Tape data only

FLIGHT SUMMARY

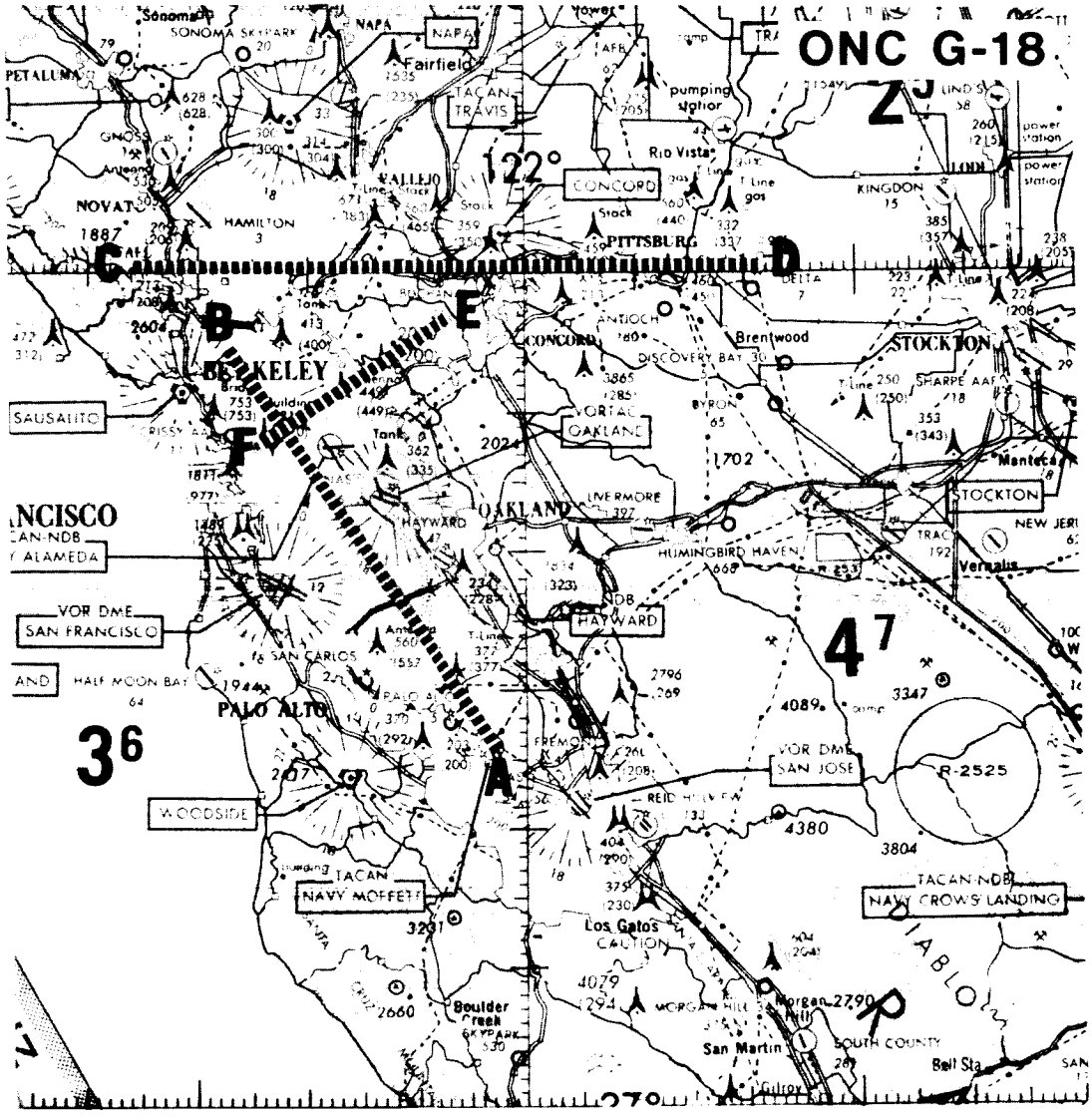
80-143

This flight was flown in support of Flight Request #0666 (Lumb, NASA/ ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The Daedalus Multispectral Scanner (DMS) data was acquired over the San Francisco Bay Area (see Track Map).

The Daedalus Multispectral Scanner is a modified Daedalus DEI-1260 eleven channel scanner. The system is entirely digital, with ten channels in the visible and near visible portions of the spectrum and one channel in the thermal infrared region. The scanner has an IFOV of either 1.25 or 2.5 milliradians depending on the scanhead utilized. Flight data tapes are ground processed to produce computer compatible tapes. Sensor specifications are:

IFOV	1.25mrad	2.5mrad
Pixels/scan line	715	715
Scan angle	42°	85°
Swath width	8nm	18nm
Scan rate	10 lines/sec	10 lines/sec
Resolution (from 65,000 ft)	80 ft	160 ft

Channel 1	.38 - .42um	Channel 7	.65 - .69um
Channel 2	.42 - .45um	Channel 8	.70 - .79um
Channel 3	.45 - .50um	Channel 9	.80 - .89um
Channel 4	.50 - .55um	Channel 10	.90 - 1.10um
Channel 5	.55 - .60um	Channel 11	10.40 - 12.50um
Channel 6	.60 - .65um		



FLIGHT 80-143

28 August 1980

Data Run

DMS

FLIGHT SUMMARY REPORT

Flight No: 80-145

Date: 3 September 1980

FSR No: 1457

Julian Date: 247

Sensor Package: A-3 Configuration (one camera only)

Aircraft No: 5

Purpose of Flight: #0861 Support
Requestor: Weber

Area(s) Covered: Utah

SENSOR DATA

Accession No:	02943
Sensor ID No:	018
Sensor Type:	HR-732
Focal Length:	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .30B
Spectral Band:	510-900nm
f Stop:	8
Shutter Speed:	1/75
No. of Frames:	360
% Overlap:	60
Quality:	Excellent
Remarks:	---

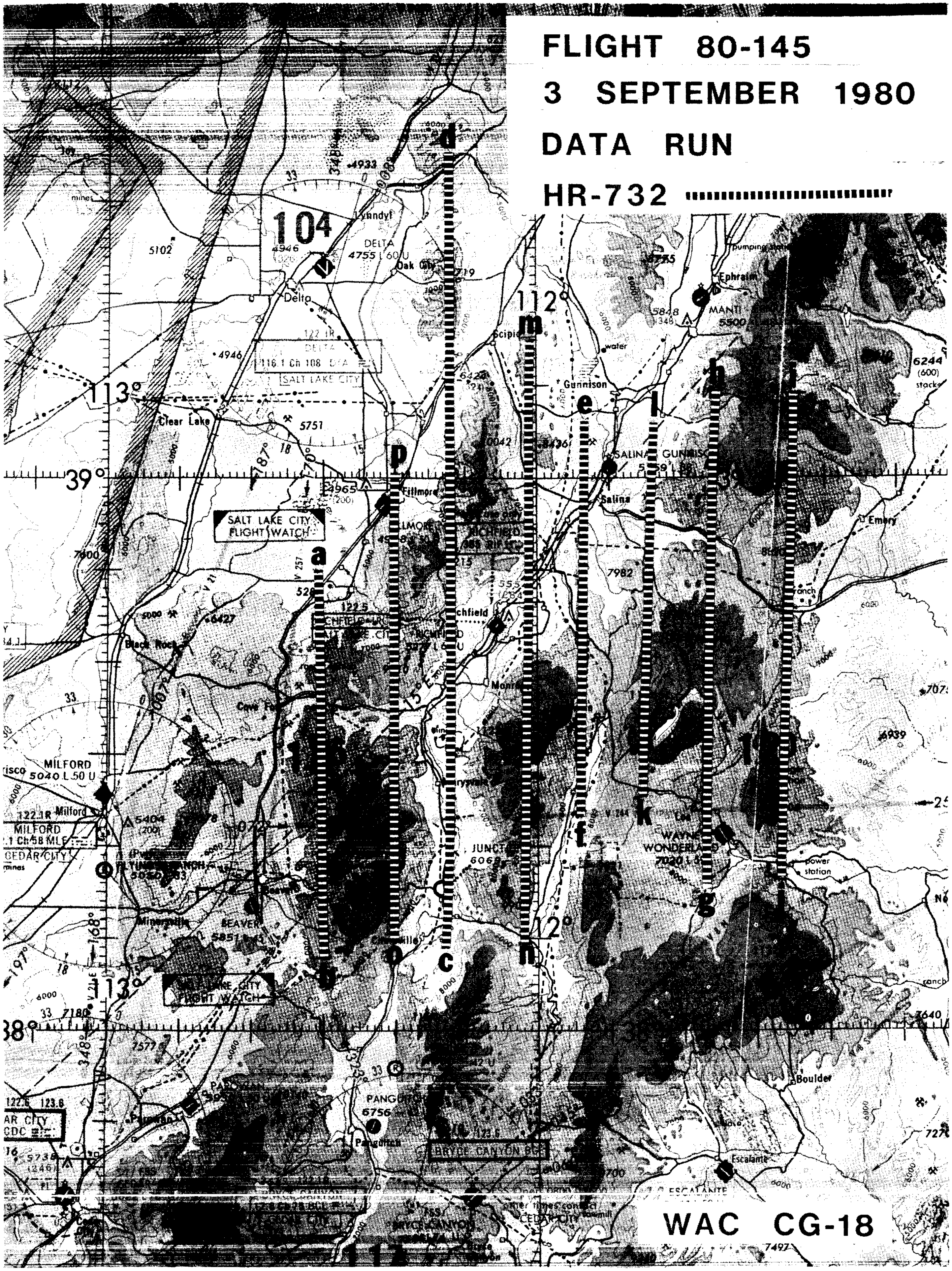
FLIGHT SUMMARY

80-145

This flight was flown in support of Flight Request #0861 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The A-3 camera configuration was flown over Utah utilizing only one camera.

The area flown was generally cloud-free with very minor cumulus encountered on some flight lines (see Flight Line Data). No camera or processing malfunctions were noted and the quality of the data is rated excellent.

FLIGHT 80-145
3 SEPTEMBER 1980
DATA RUN
HR-732



WAC CG-18

FLIGHT SUMMARY REPORT

Flight No: 80-146

Date: 4 September 1980

FSR No: 1458

Julian Date: 248

Sensor Package: Itek Optical Bar Panoramic Camera

Aircraft No: 5

Purpose of Flight: #0849 Support
Requestor: Kirsch

Area(s) Covered: Colorado

SENSOR DATA

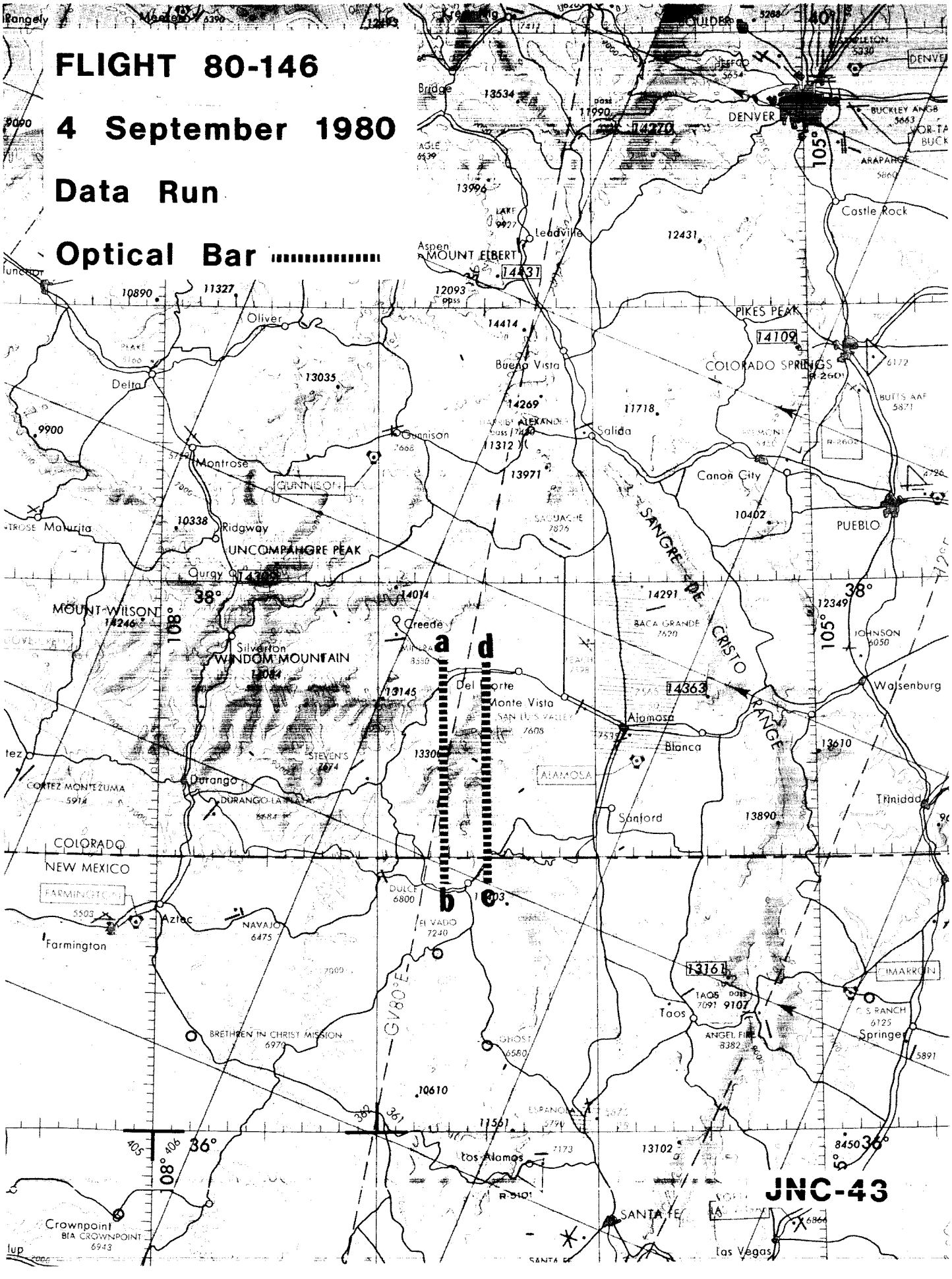
Accession No:	02944
Sensor ID No:	029
Sensor Type:	Optical Bar
Focal Length:	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .20C
Spectral Band:	510-900nm
f Stop:	3.5
Shutter Speed:	1/250
No. of Frames:	141
% Overlap:	Stereo convergent mode
Quality:	Excellent
Remarks:	---

FLIGHT SUMMARY

80-146

This flight was flown in support of Flight Request #0849 (Kirsch, USGS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The Itek Optical Bar Panoramic Camera was flown in the stereo convergent mode near the Colorado/New Mexico state border (see Track Map).

The entire area was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.


FLIGHT 80-146
4 September 1980
Data Run
Optical Bar
a
b
c
d
JNC-43
Durango
Farmington
Aztec
Crownpoint
Gallup
Los Alamos
Taos
Alamosa
Monte Vista
Del Norte
Creede
Silverton
Ridgway
Montrose
Delta
Gunnison
Salida
Buena Vista
Leadville
Aspen
Canon City
Pueblo
Colorado Springs
Denver
Boulder
Castle Rock
Trinidad
Walsenburg
Springer
Las Vegas
Santa Fe
Sanford
Blanca
Oliver
Ouray
Mount Wilson
Windom Mountain
Uncompahgre Peak
Mount Elbert
Pikes Peak
Sangre de Cristo Range
Colorado
New Mexico
108°
38°
36°
105°

FLIGHT SUMMARY REPORT

Flight No: 80-148

Date: 9 September 1980

FSR No: 1459

Julian Date: 253

Sensor Package: IRIS II Panoramic Camera System
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0890 Support
Requestor: Weber
#0047 Support
Requestor: Ferry

Area(s) Covered: California

SENSOR DATA

Accession No:	02945	---
Sensor ID No:	066	024
Sensor Type:	IRIS II	APS
Focal Length:	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20B	---
Spectral Band:	510-900nm	---
f Stop:	3.5	---
Shutter Speed:	1/250	---
No. of Frames:	514	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

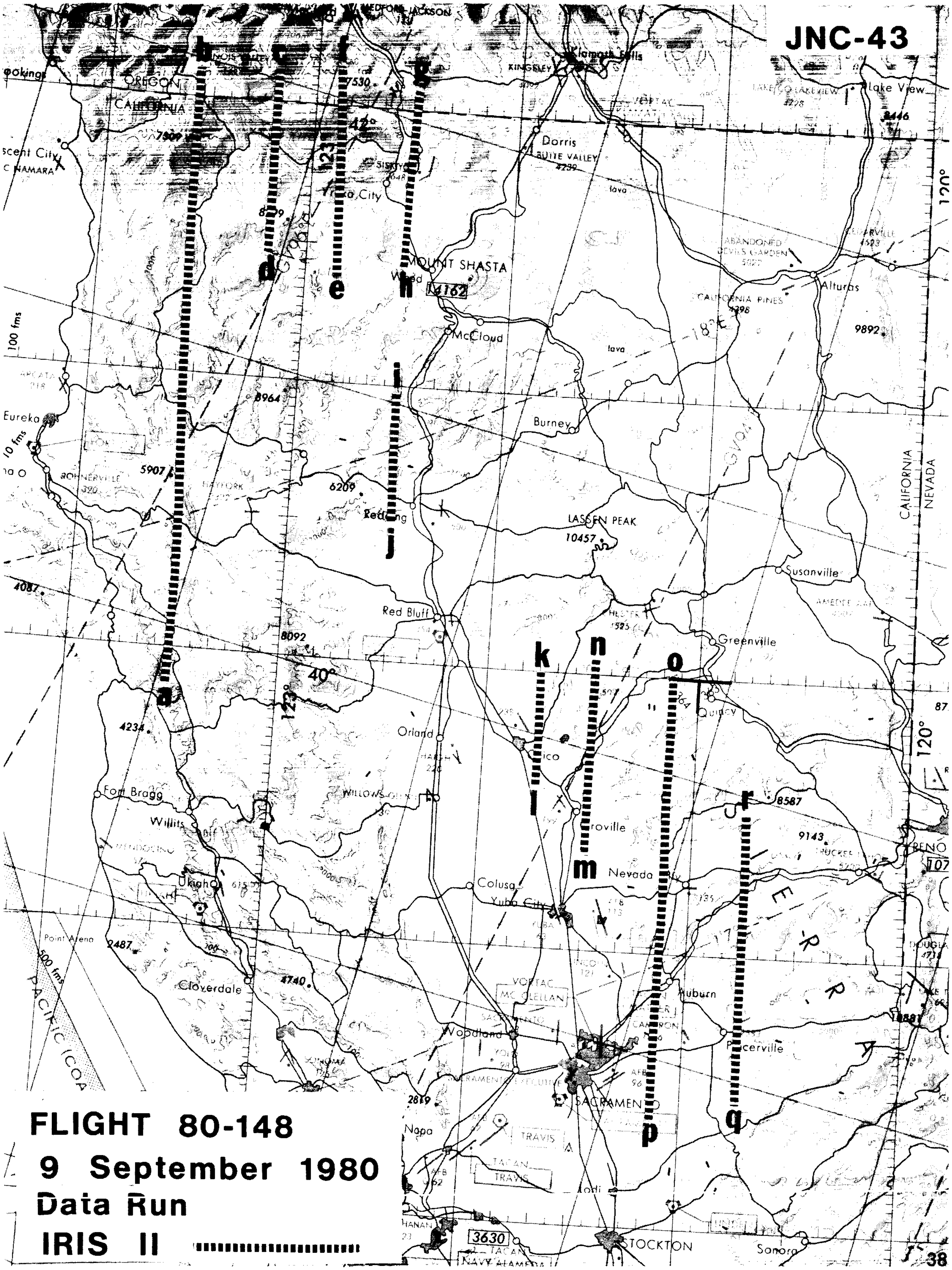
FLIGHT SUMMARY

80-148

This flight was flown in support of Flight Requests #0890 (Weber, USFS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The IRIS II Panoramic Camera System was utilized to acquire data over California (see Track Map). Aerosol Particulate Sampler (APS) data was also collected during the flight but is not indicated on the track map.

The area flown had very minor cloud-cover. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



FLIGHT 80-148

9 September 1980

Data Run

IRIS II ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪

FLIGHT SUMMARY REPORT

Flight No: 80-149

Date: 10 September 1980

FSR No: 1460

Julian Date: 254

Sensor Package: RC-10

Aircraft No: 5

Purpose of Flight: #0774 Support
Requestor: Shelton
#0047 Support
Requestor: Ferry

Area(s) Covered: Las Vegas, Nevada

SENSOR DATA

Accession No:	02946	---
Sensor ID No:	035	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.46mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20 B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/100	---
No. of Frames:	13	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

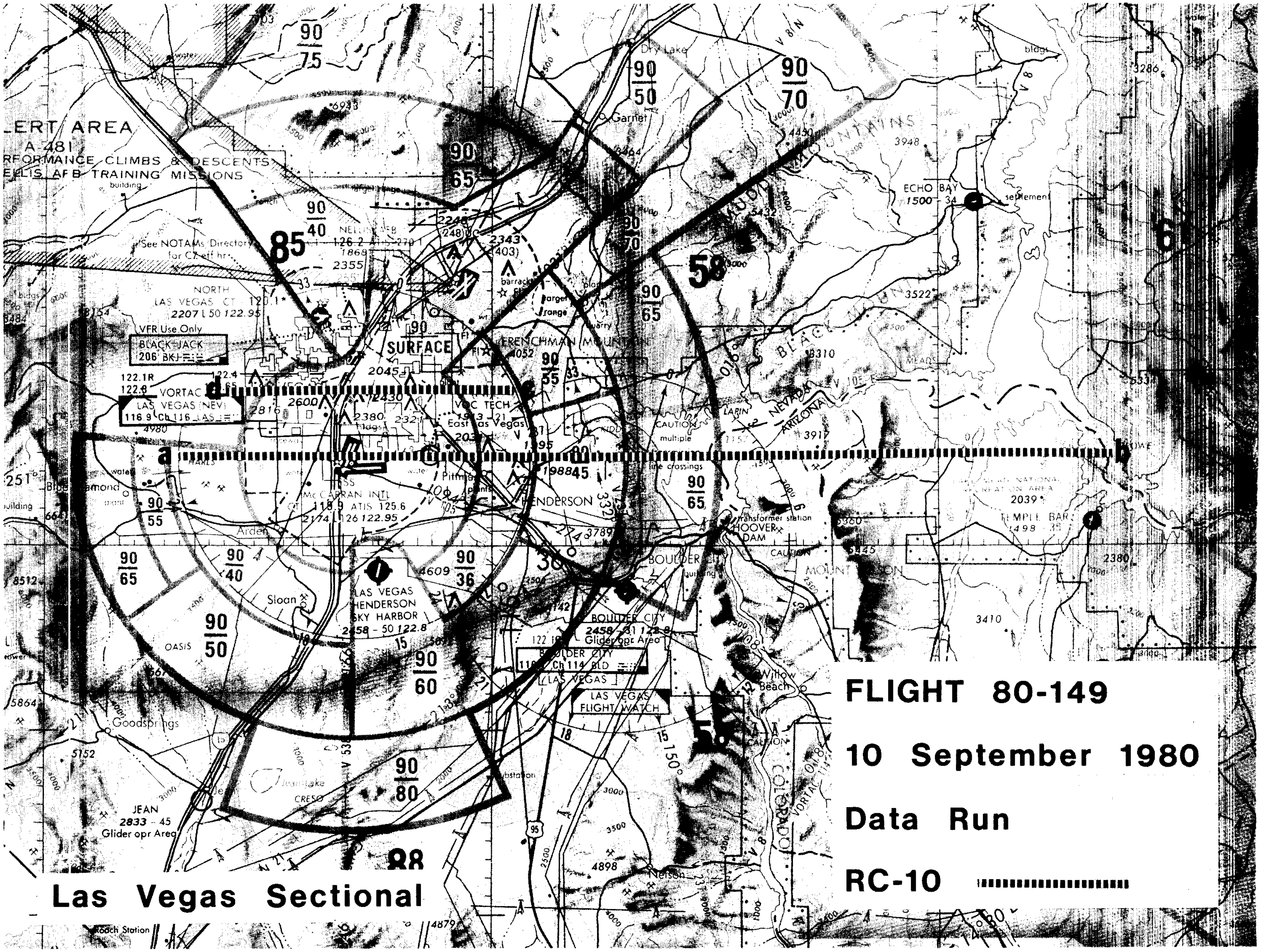
FLIGHT SUMMARY

80-149

This flight was flown in support of Flight Requests #0774 (Shelton, EPA) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Data was acquired over the Las Vegas, Nevada area with the RC-10 camera system. Aerosol Particulate Sampler (APS) data was also collected but is not indicated on the track map.

The entire area was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



FLIGHT 80-149
10 September 1980
Data Run
RC-10
Las Vegas Sectional
ALERT AREA
A-481
PERFORMANCE CLIMBS & DESCENTS
NELLIS AFB TRAINING MISSIONS
SURFACE
FRENCHMAN MOUNTAIN
McCARRAN INTL
HENDERSON
BOULDER CITY
HOOVER DAM
ECHO BAY
TEMPLE BAR
LAS VEGAS HENDERSON SKY HARBOR
LAS VEGAS FLIGHT WATCH
BLACK MOUNTAINS
NEVADA
ARIZONA
COLORADO
Goodsprings
JEAN
Sloan
OASIS
a
b
c
d

FLIGHT SUMMARY REPORT

Flight No: 80-150

Date: 11 September 1980

FSR No: 1461

Julian Date: 255

Sensor Package: IRIS II Panoramic Camera System
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0890 Support
Requestor: Weber
#0047 Support
Requestor: Ferry

Area(s) Covered: California

SENSOR DATA

Accession No:	02947	---
Sensor ID No:	066	024
Sensor Type:	IRIS II	APS
Focal Length:	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20B	---
Spectral Band:	510-900nm	---
f Stop:	3.5	---
Shutter Speed:	1/250	---
No. of Frames:	440	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

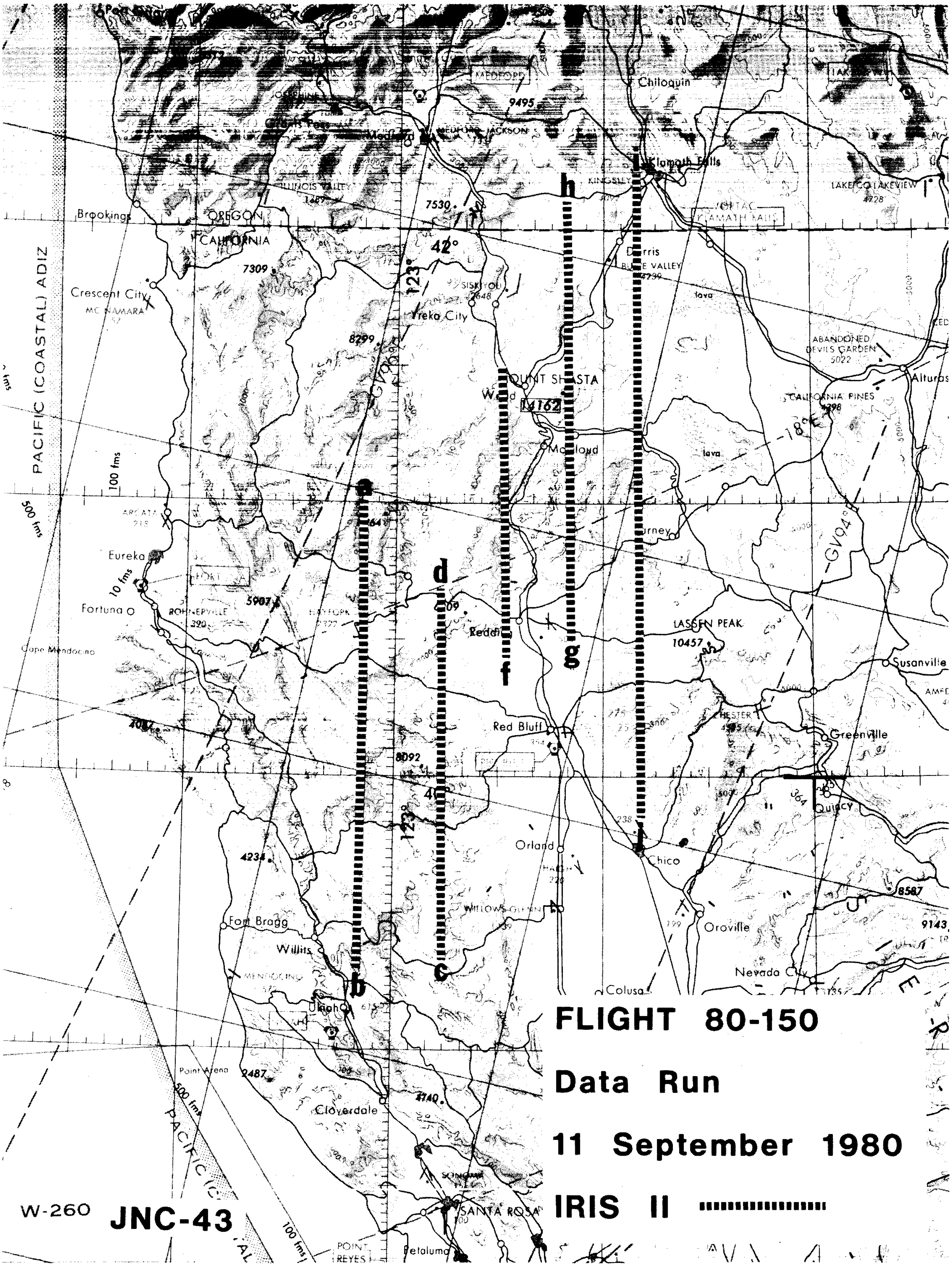
FLIGHT SUMMARY

80-150

This flight was flown in support of Flight Requests #0890 (Weber, USFS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The data was collected over northern California using the IRIS II Panoramic Camera system. Aerosol Particulate Sampler (APS) data was also collected but is not indicated on the track map.

The entire area was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.



FLIGHT 80-150

Data Run

11 September 1980

IRIS II ▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪▪

FLIGHT SUMMARY REPORT

Flight No: 80-152

Date: 17 September 1980

FSR No: 1462

Julian Date: 261

Sensor Package: RC-10
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0666 Support
Requestor: Lumb
#0047 Support
Requestor: Ferry

Area(s) Covered: Idaho

SENSOR DATA

Accession No:	02948	---
Sensor ID No:	035	024
Sensor Type:	RC-10	APS
Focal Length:	6" 153.46mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20B + 2.2AV	---
Spectral Band:	510-900nm	---
f Stop:	4	---
Shutter Speed:	1/75	---
No. of Frames:	154	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

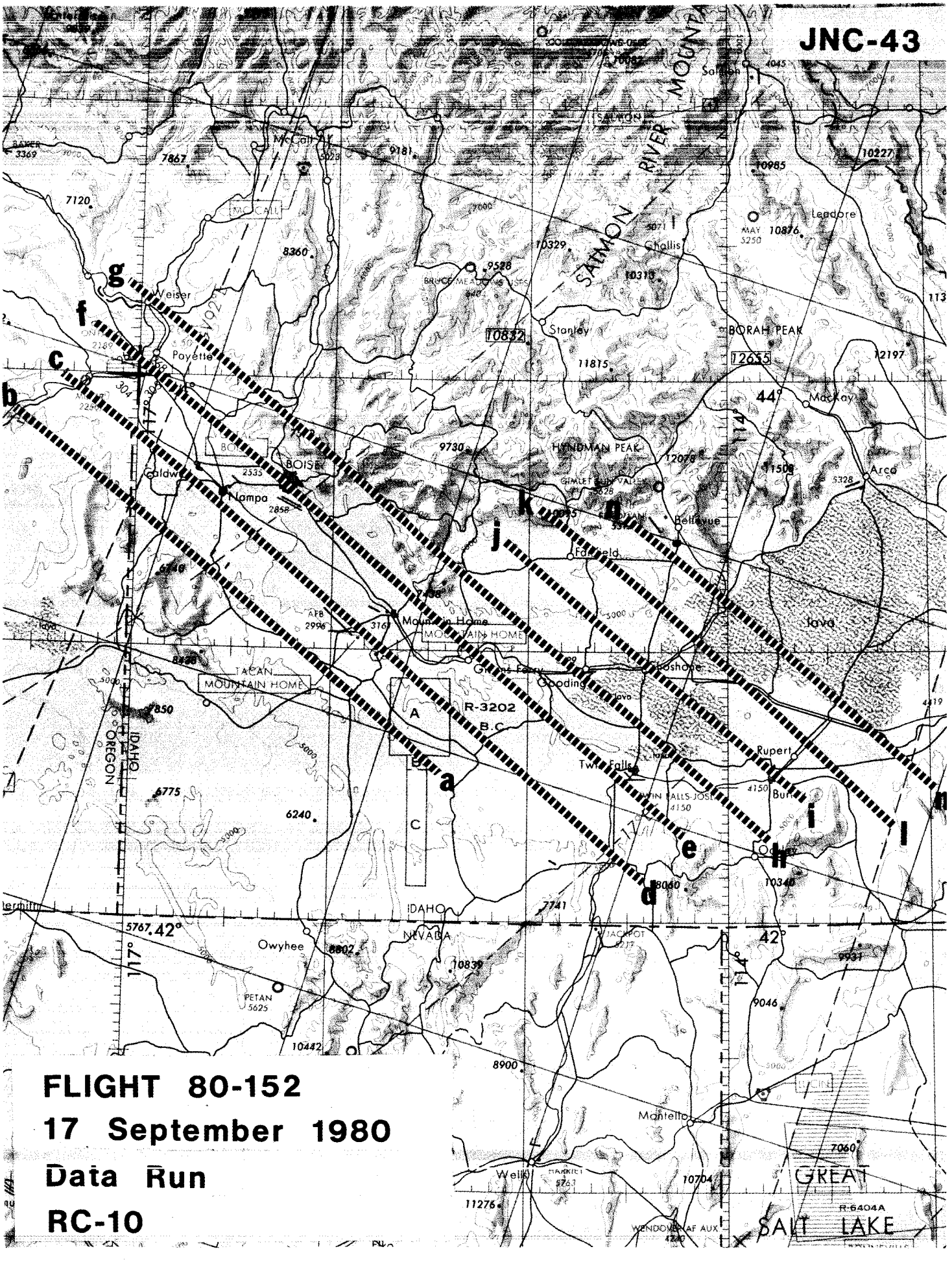
FLIGHT SUMMARY

80-152

This flight was flown in support of Flight Request #0666 (Lumb, NASA/ ARC) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. RC-10 photographic coverage was obtained over the southwest corner of Idaho (see Track Map). Aerosol Particulate Sampler (APS) data was also collected but is not indicated on the track map.

The entire area was cloud-free. Data annotation is only imaged on those frames triggered by the intervelometer. No annotation is imaged on single pulse frames. No camera or processing malfunctions were noted and the quality of the data is rated excellent.

The APS has been developed and is operated by Dr. Guy Ferry of the NASA-Ames Research Center Atmospheric Experiments Branch. The sampler is a non-imaging sensor designed to gather high altitude dust particles for laboratory research.


JNC-43
FLIGHT 80-152
17 September 1980
Data Run
RC-10

FLIGHT SUMMARY REPORT

Flight No: 80-154

Date: 24 September 1980

FSR No: 1476

Julian Date: 268

Sensor Package: Daedalus Multispectral Scanner (DMS)

Aircraft No: 4

Purpose of Flight: #0889 Support
Requestor: Winter

Area(s) Covered: Santa Cruz and Vandenberg AFB, California

SENSOR DATA

Accession No:	---
Sensor ID No:	059
Sensor Type:	DMS
Focal Length:	---
Film Type:	---
Filtration:	---
Spectral Band:	.38 - 1.10um 10.4 - 12.5um
f Stop:	---
Shutter Speed:	---
No. of Frames:	---
% Overlap:	---
Quality:	---
Remarks:	Tape data only

FLIGHT SUMMARY

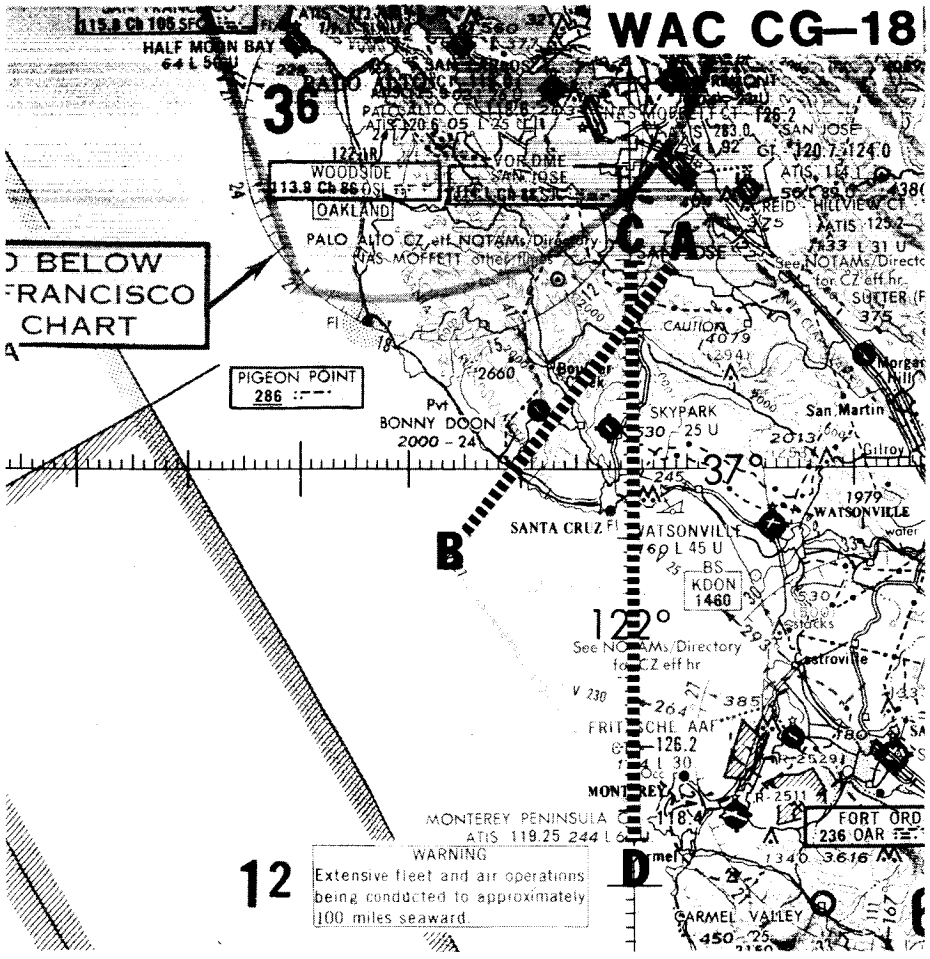
80-154

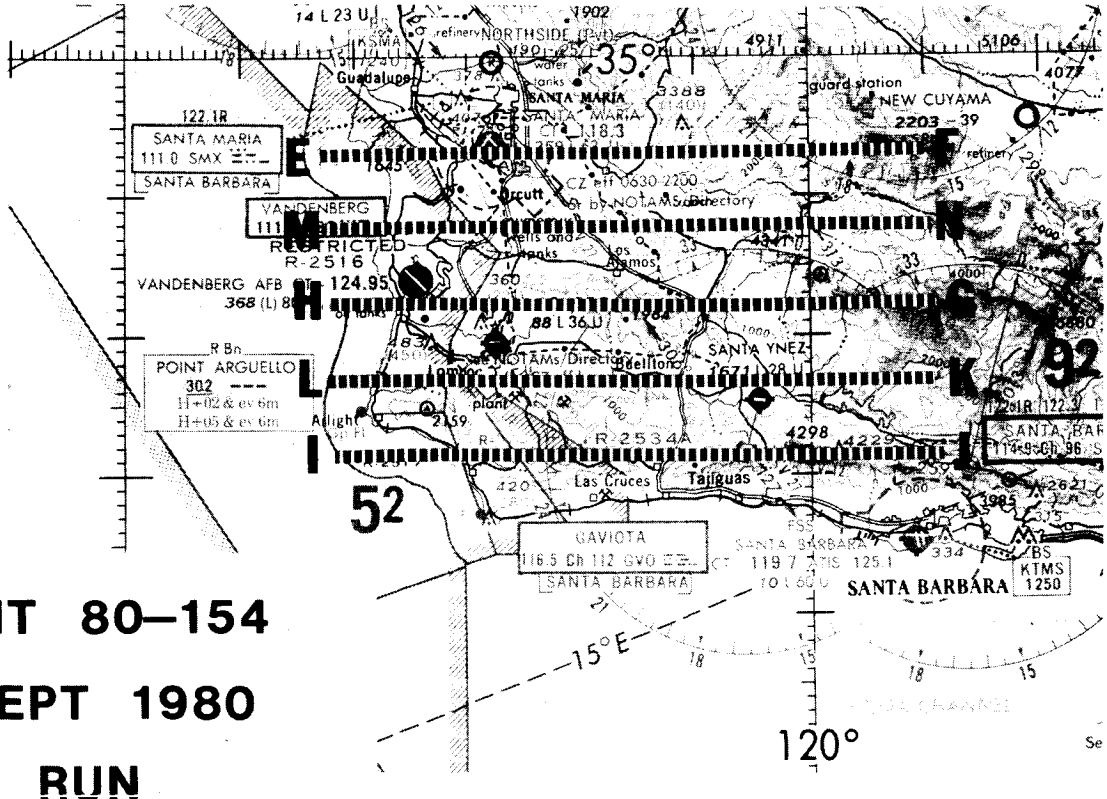
This flight was flown in support of Flight Request #0889 (Winter, IBM) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. Daedalus Multispectral Scanner (DMS) data was acquired during a flight over Santa Cruz and Vandenberg AFB, California (see Track Map).

The Daedalus Multispectral Scanner is a modified Daedalus DEI-1260 eleven channel scanner. The system is entirely digital, with ten channels in the visible and near visible portions of the spectrum and one channel in the thermal infrared region. The scanner has an IFOV of either 1.25 or 2.5 milliradians depending on the scanhead utilized. Flight data tapes are ground processed to produce computer compatible tapes. Sensor specifications are:

IFOV	1.25mrad	2.5mrad
Pixels/scan line	715	715
Scan angle	42°	85°
Swath width	8nm	18nm
Scan rate	10 lines/sec	10 lines/sec
Resolution (from 65,000 ft)	80 ft	160 ft

Channel 1	.38 - .42um	Channel 7	.65 - .69um
Channel 2	.42 - .45um	Channel 8	.70 - .79um
Channel 3	.45 - .50um	Channel 9	.80 - .89um
Channel 4	.50 - .55um	Channel 10	.90 - 1.10um
Channel 5	.55 - .60um	Channel 11	10.40 - 12.50um
Channel 6	.60 - .65um		





FLIGHT 80–154

24 SEPT 1980

DATA RUN

DMS

FLIGHT SUMMARY REPORT

Flight No: 80-156

Date: 25 September 1980

FSR No: 1463

Julian Date: 269

Sensor Package: A-3 Configuration (two cameras only)

Aircraft No: 5

Purpose of Flight: #0860 Support
Requestor: Weber

Area(s) Covered: Colorado, Arizona, New Mexico, Utah

SENSOR DATA

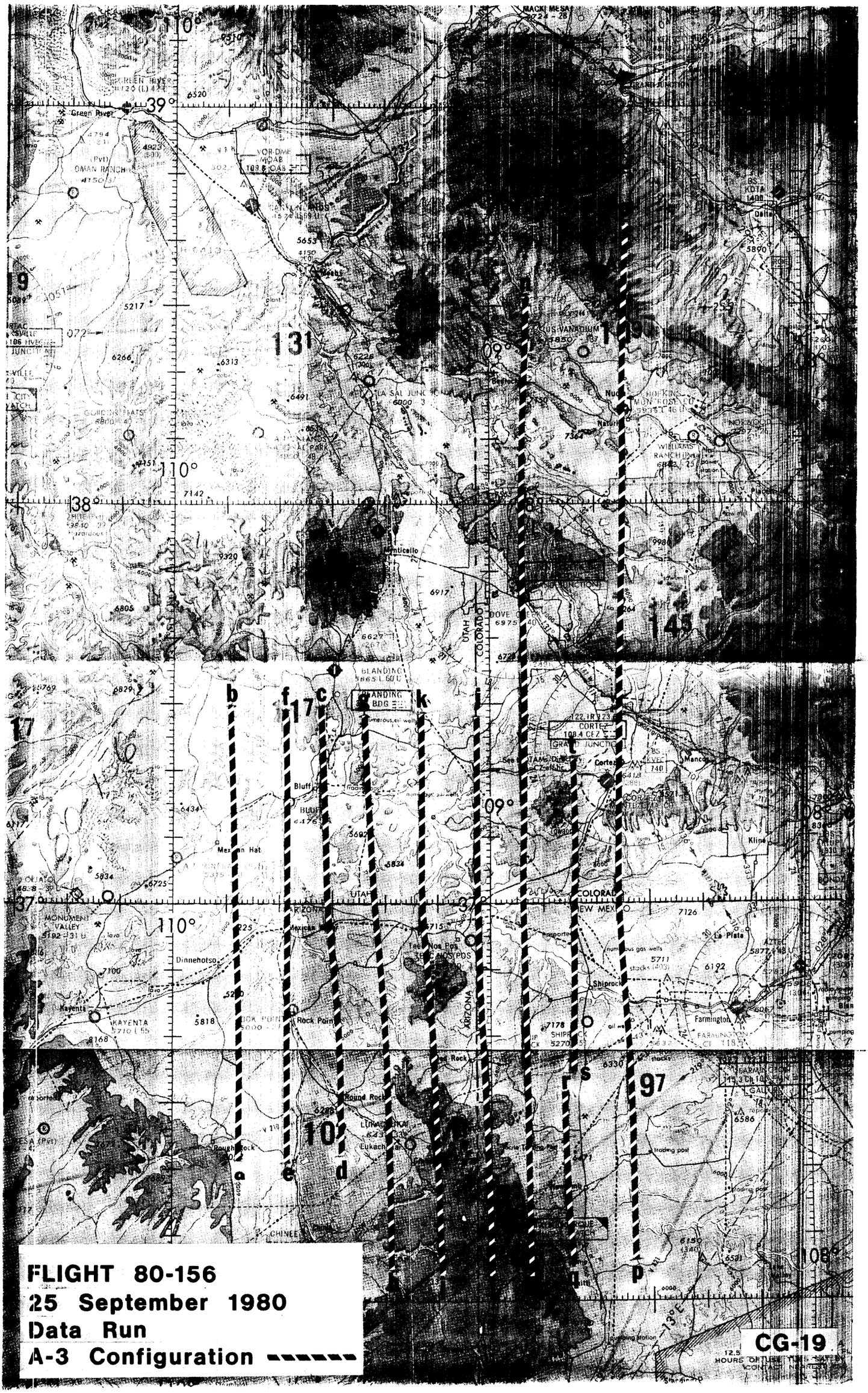
Accession No:	02949	02950
Sensor ID No:	018	019
Sensor Type:	HR-732	HR-732
Focal Length:	24" 609.6mm	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-131	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .30B	CC .30B
Spectral Band:	510-900nm	510-900nm
f Stop:	8	8
Shutter Speed:	1/75	1/75
No. of Frames:	371	267
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-156

This flight was flown in support of Flight Request #0860 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. A-3 Configuration (two cameras only) provided photographic data over portions of Colorado, Arizona, New Mexico and Utah.

There was no cloud cover over the area. No camera or processing malfunctions were noted and the quality of the data is rated excellent.


FLIGHT 80-156
25 September 1980
Data Run
A-3 Configuration
CG-19

FLIGHT SUMMARY REPORT

Flight No: 80-157

Date: 29 September 1980

FSR No: 1464

Julian Date: 273

Sensor Package: A-3 Configuration (two cameras only)

Aircraft No: 4

Purpose of Flight: #0860 Support
Requestor: Weber

Area(s) Covered: Colorado/New Mexico

SENSOR DATA

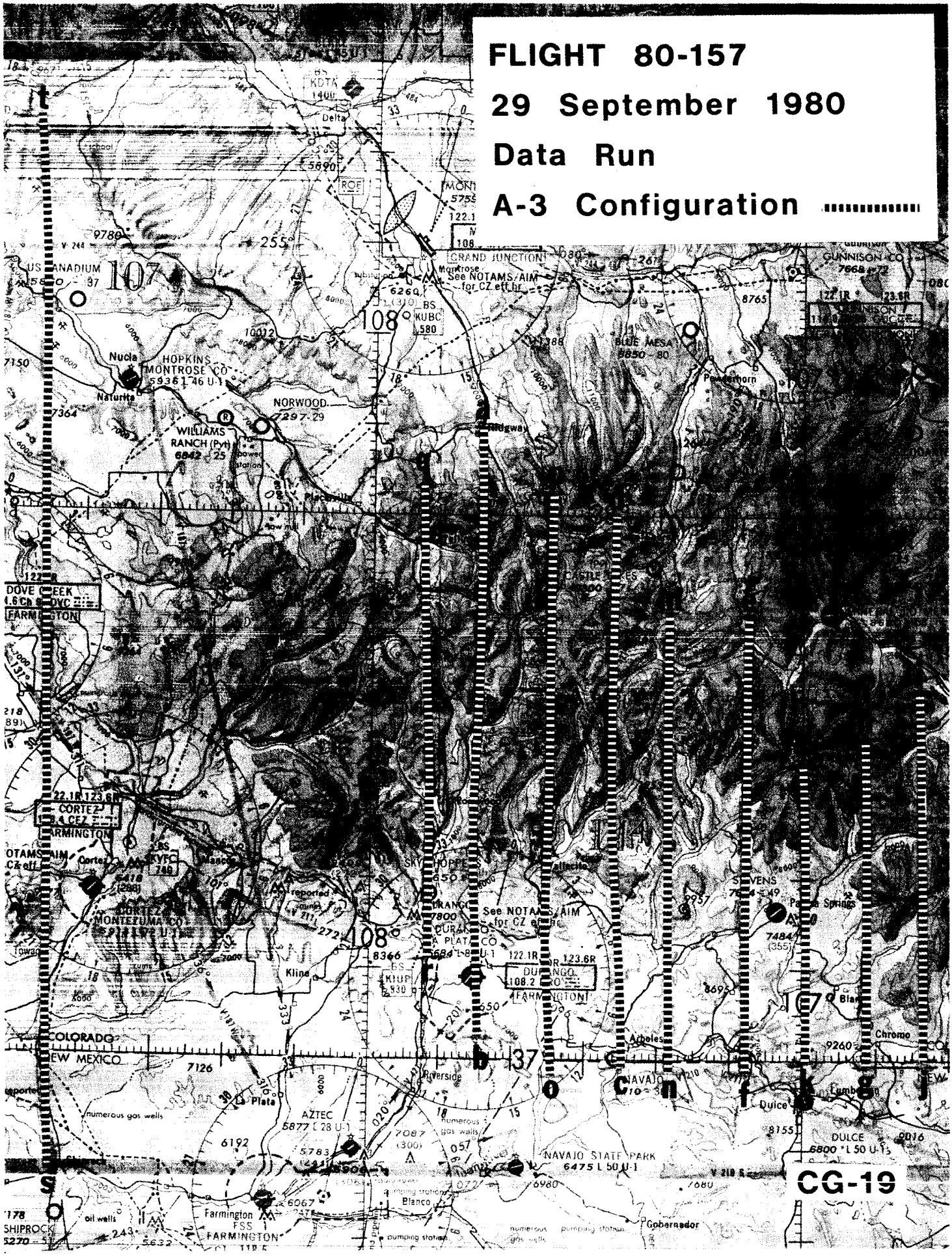
Accession No:	02951	02952
Sensor ID No:	018	019
Sensor Type:	HR-732	HR-732
Focal Length:	24" 609.6mm	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-131	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .30B	CC .30B
Spectral Band:	510-900nm	510-900nm
f Stop:	8	8
Shutter Speed:	1/75	1/75
No. of Frames:	374	95
% Overlap:	60	60
Quality:	Excellent	Excellent
Remarks:	---	---

FLIGHT SUMMARY

80-157

This flight was flown in support of Flight Request #0860 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. A-3 camera configuration (two cameras only) provided photographic data over portions of Arizona, New Mexico and Colorado.

There was no cloud cover over the area. No camera or processing malfunctions were noted and the quality of the data is rated excellent.


FLIGHT 80-157
29 September 1980
Data Run
A-3 Configuration
CG-19
GRAND JUNCTION
Montrose
See NOTAMS/AIM for CZ eff hr
Delta
Nucla
HOPKINS MONTROSE CO
Naturita
NORWOOD
WILLIAMS RANCH (Pvt)
Ridgway
BLUE MESA
Pagosa Springs
DOVE CREEK
FARMINGTON
CORTEZ
MONTEZUMA CO
Cortez
Kline
DURANGO
DURANGO-LA PLATA CO
COLORADO
NEW MEXICO
La Plata
AZTEC
Riverside
Arboles
Chromo
Dulce
DULCE
NAVAJO STATE PARK
Farmington FSS
FARMINGTON
Blanco
Gobernador
SHIPROCK
numerous gas wells
oil wells
pumping stations

FLIGHT SUMMARY REPORT

Flight No: 80-158

Date: 29 September 1980

FSR No: 1465

Julian Date: 273

Sensor Package: A-4 Configuration (one camera only)
Aerosol Particulate Sampler (APS)

Aircraft No: 5

Purpose of Flight: #0860 Support
Requestor: Weber
#0047 Support
Requestor: Ferry

Area(s) Covered: Colorado/New Mexico

SENSOR DATA

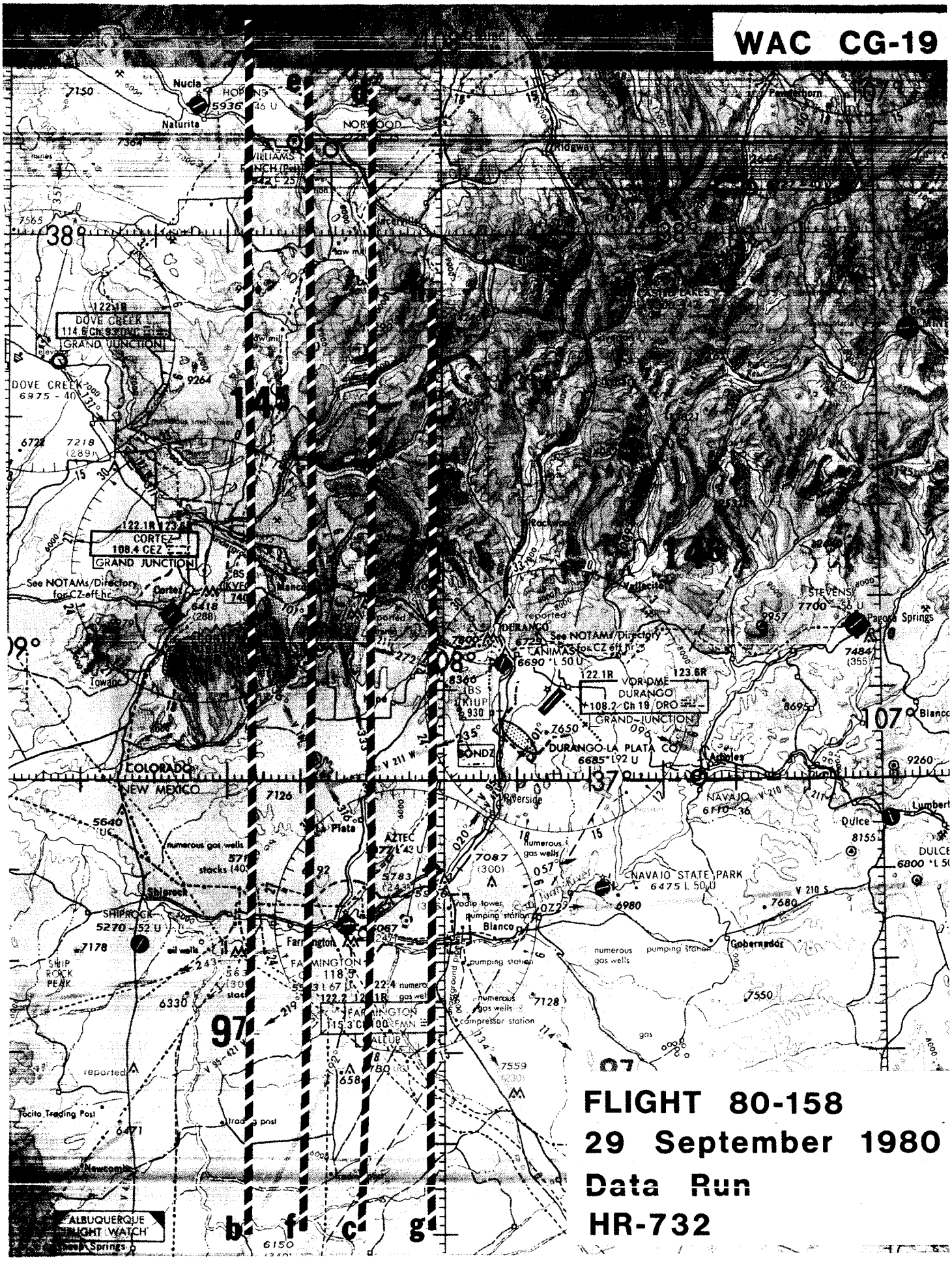
Accession No:	02887	---
Sensor ID No:	039	024
Sensor Type:	HR-732	APS
Focal Length:	24" 609.6mm	---
Film Type:	High Definition Aerochrome Infrared, SO-131	---
Filtration:	CC .20B	---
Spectral Band:	510-900nm	---
f Stop:	8	---
Shutter Speed:	1/75	---
No. of Frames:	375	---
% Overlap:	60	---
Quality:	Excellent	---
Remarks:	---	Non-imaging sensor

FLIGHT SUMMARY

80-158

This flight was flown in support of Flight Request #0860 (Weber, USFS) and #0047 (Ferry, NASA/ARC) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. One camera of the A-4 camera configuration was utilized to acquire photography over Colorado and New Mexico. Aerosol Particulate Sampler (APS) data was also collected but is not indicated on the track map.

The entire area was cloud-free. Due to a LED failure the times listed were estimated from the pilot's flight log. No other camera or processing malfunctions were noted and the quality of the data is rated excellent.


WAC CG-19
Nucla
Naturita
DOVE CREEK
GRAND JUNCTION
CORTEZ
108.4 CEZ
See NOTAMs/Directory for CZ eff hr
DURANGO
See NOTAMs/Directory for CZ eff hr
ANIMAS
VOR/DME
DURANGO
108.2 Ch 19 DRO
GRAND JUNCTION
DURANGO-LA PLATA CO
COLORADO
NEW MEXICO
SHIPROCK
FARMINGTON
ALBUQUERQUE
FLIGHT WATCH
NAVAJO STATE PARK
Blanco
Aztec
Bondz
Riverside
Adobes
Dulce
Lumberton
Gobernador
Pagosa Springs
Stevens
Rockwood
Ridgway
Vallecito
Towaoc
Cortez
Focita Trading Post
Newcomb
numerous gas wells
pumping station
compressor station
oil wells
radio tower
reported
FLIGHT 80-158
29 September 1980
Data Run
HR-732

FLIGHT SUMMARY REPORT

Flight No: 80-159

Date: 30 September 1980

FSR No: 1466

Julian Date: 274

Sensor Package: Itek Optical Bar Panoramic Camera

Aircraft No: 4

Purpose of Flight: #0890 Support
Requestor: Weber

Area(s) Covered: Northern California

SENSOR DATA

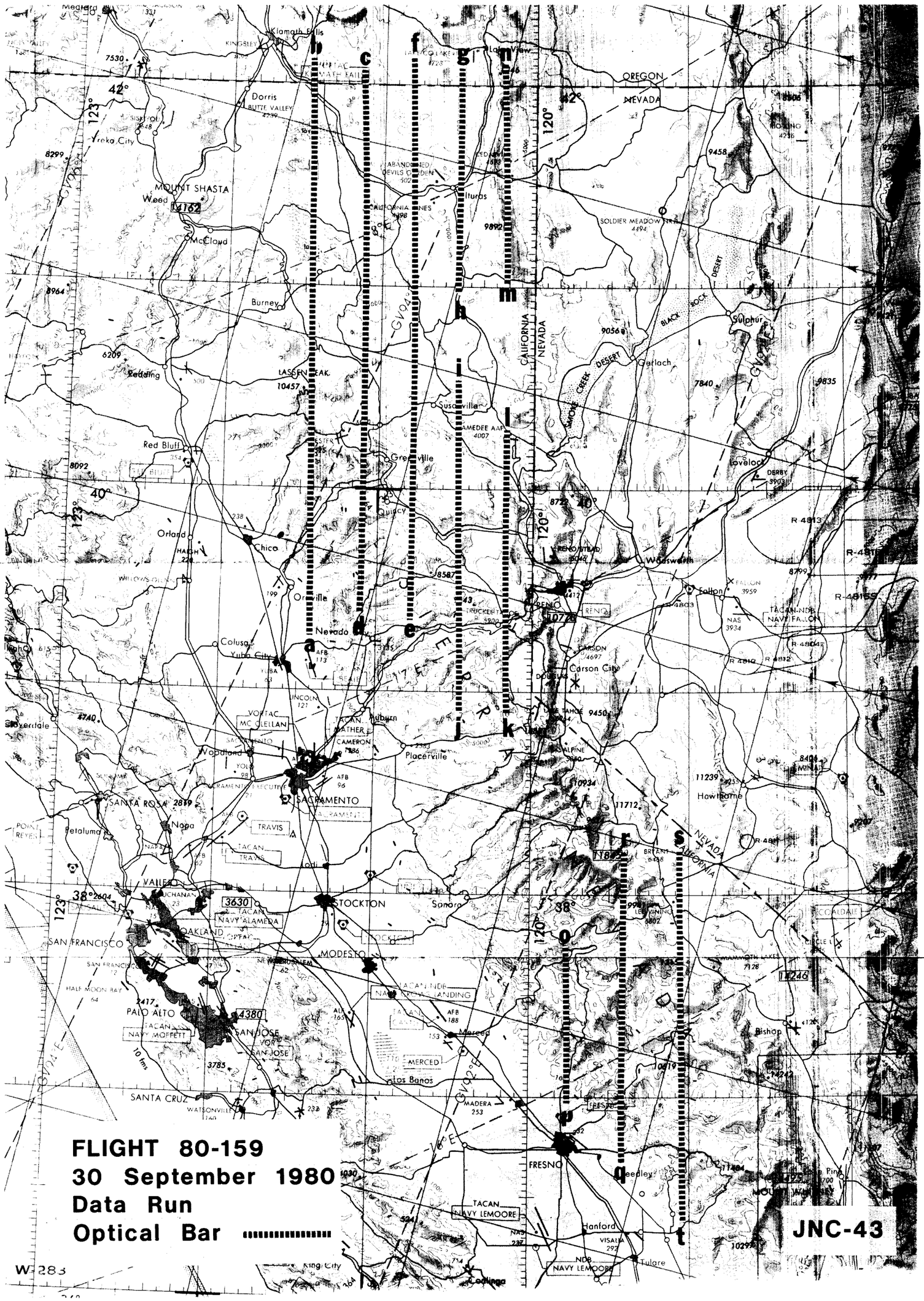
Accession No:	02953
Sensor ID No:	029
Sensor Type:	Optical Bar
Focal Length:	24" 609.6mm
Film Type:	High Definition Aerochrome Infrared, SO-131
Filtration:	CC .30B
Spectral Band:	510-900nm
f Stop:	3.5
Shutter Speed:	1/200
No. of Frames:	1140
% Overlap:	60
Quality:	Excellent
Remarks:	---

FLIGHT SUMMARY

80-159

This flight was flown in support of Flight Request #0890 (Weber, USFS) under the FY 1980 Airborne Instrumentation Research Program (AIRP) plan. The data was collected over northern California and the southern Sierra Nevada using the Itek Optical Bar Panoramic camera.

The entire area was cloud-free. No camera or processing malfunctions were noted and the quality of the data is rated excellent.


FLIGHT 80-159
30 September 1980
Data Run
Optical Bar
JNC-43
W-285